CONTENTS OF SUPPLEMENT.


PERSONAL ..... 9
Obituary ..... 9
ENGINEERING SOCIETIES ..... 9
Coming Technical Meetings ..... 9
NEW PUBLICATIONS ..... 10
Trade Publications ..... 10
CONSTRUCTION NEWS:
Condensed List of Contracts Pending ..... 10
Railways ..... 11
Street and Electric Railways ..... 11
Electric Light and Power ..... 11
Bridges ..... 12
Buildings ..... 12
Water-Works ..... 13
Irrigation ..... 14
Sewerage ..... 14
Garbage Disposal and Street Cleaning ..... 14
Streets and Roads ..... 14
Manufacturing Plants ..... 14
Gas Plants ..... 15
Miscellaneous Contracts ..... 15
Contract Prices ..... 15
INDUSTRIAL NOTES ..... 16


## PERSONAL.

Mr. Benjamin R. Chapman has been elected City Engineer of Brockton, Mass.

Col. August Goebel has resigned as a member of the Board of Water Commissioners of Detroit, Mich.

Mr. Leroy Ackerly has been appointed Superintendent of the Northport Water-Works Co., Northport (Long Island), N. Y.

Mr. G. L. F. Brouscaren, M. Am. Soc. C. E., has removed his office from the Mitchell Building, Cincinnati, O. to the City Hall.

Mr. Kennedy Crossan, President of the Citizens' Street R. R. Co. of Indianapolis, Ind., has resigned to devote himself to his private business.

Mr. C. B. Adams, Car Service Agent of the Wabash R. R., with headquarters in St. Louis, Mo., has been appointed Superintendent of Transportation.

Mr. John Bagley, Vice-President, and Mr. J. N. Faithorn, General Manager of the Wisconsin & Michigan Ry., with headquarters in Chicago, Ill., have resigned.

Mr. Edgar Van Etten, General Superintendent of the New York Central & Hudson River R. R., with offices in New York city, has been elected President of the Randsburg R. R.

Mr. James Fitch has been appointed Deputy Commissioner of Water Supply for the Borough of Queens, New York city, and Mr. John E. Backus Deputy Commissioner of Bridges in the same borough.

Mr. William Brennan has been apointed Deputy Commissioner of Sewers for the Borough of Brooklyn, New York city, and Mr. Henry Beam, Deputy Commissioner of Bridges for the same borough.

Capt. W. R. Livermore, U. S. Navy, who for several years has been in charge of the Lighthouse District at Boston, Mass., has been appointed Naval Attache of the United States for Sweden and Norway, with Minister Thomas.

Mr. Carl Ericsson, a relative of the builder of the famous "Monitor," and Mr. George Danielson, both Swedish engineers, are visiting the United States to make an inspection of the power plants and other industries of the country.

Mr. George E. Best has been appointed Deputy Commissioner of Public Buildings, Lighting and Supplies for the Borough of the Bronx, New York city, and Mr. Thomas J. Byrne, Deputy Commissioner of Sewers of the same borough.

Hon. H. C. Tompkins has been elected President, Mr. W. F. Vandiver Vice-President, Mr. Sol. D. Bloch General Manager and Secretary and Mr. John P. Kohn Treasurer of the Montgomery, Hayneville & Camden R. R., Montgomery, Ala.

Mr. Henry Goldmark, M. Am. Soc. C. E., has been engaged by the Board of Engineers on Deep Waterways to make special investigations into the question of large locks. His present address is in care of the above board, at Detroit, Mich.

Mr. M. H. Gerry, Jr., formerly Superintendent of Motive Power of the Metropolitan Elevated R. R. of Chicago, Ill., has severed his connection with that road and is now connected with the General Electric Co., with headquarters at 706 Phoenix Building, Minneapolis, Minn.

Mr. J. K. Freitag, who for the past two years has been the New England agent of the Brown-Ketcham Iron Works, at Boston, Mass., has become associated with the New England office of the Pencoyd Iron Works, Philadelphia, Pa. Mr. W. B. Ogram is the agent, with office in the Brazer Building, Boston.

Mr. Samuel J. Lord has been elected City Engineer of Manchester, N. H., succeeding Mr. Winfred H. Bennett. Mr. Lord was born in that city and graduated from Dartmouth College, Hanover, N. H., in 1892. He took a special course in mathematics in Harvard University and in 1895 graduated from the Thayer School of Engineering, Hanover, N. H.

Mr. A. F. Nagle, M. Am. Soc. M. E., of Chicago, Ill., has been engaged by the Lane & Bodley Co., of Cincinnati, O., as consulting engineer on the construction of the new 30,000,000-gallon pumping engines, the contract for which was recently awarded to this company. Mr. Nagle was at one time the Engineer of the Providence Pumping Engine Works, Providence, R. I., and was the consulting engineer to the Lane & Bodley Co. in preparing the preliminary plans for the Cincinnati engines.

## OBITUARY.

Mr. Charles A. Schultz, contractor, of Hoboken, N. J., committed suicide Jan 6.

Mr. Seth D. Tripp, inventor of shoe machinery, died at Lynn, Mass., Jan. 7, aged 72.

Capt. W. E. Hall, Superintendent of the Great Leroi Mine, Rossland, B. C., was instantly killed Jan. 5 by falling down the mine shaft. He was 60 years of age.

Major Moses Purnell Handy, Special Commissioner of the Paris Exposition of 1900, died at the Hotel Bon Air, Augusta, Ga., Jan. 8. He was born in Warsaw, Mo., April 14, 1847, and was educated at the Virginia Collegiate and Military Institute, Portsmouth, Va. He began newspaper work in 1866, as a reporter on the Richmond, Va., "Dispatch," having previously served through the war in the Confederate army. He later became editor-in-chief of the Richmond "Enquirer" and of other Southern papers. In 1893 he was the head of the Department of Publicity and Promotion of the Columbian Exposition. In June, 1897, President McKinley appointed him Special Commissioner of the United States to the Paris International Exhibition, to be held in 1900, and he had already succeeded in securing more and better space than had been allotted to this government and better recognition than ever was accorded the United States at any previous exposition.

## ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

ENGINEERING ASSOCIATION OF THE SOUTH.
Jan. 13. Secy., C. B. Wilson, Nashville, Tenn.

CENTRAL RAILWAY CLUB.
Jan. 14. Secy., H. D. Vought, "Buffalo Courier," Buffalo, N. Y.

ST. LOUIS RAILWAY CLUB.
Jan. 14. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

FRANKLIN INSTITUTE.
Jan. 14. "Transportation and Wealth," Edw. P. North.
Jan. 25. "Magnetic Ore Separation," Lewis G. Rowand, Secy., Wm. H. Wahl, 15 S. Seventh St., Philadelphia, Pa.

THE ENGINEERS' CLUB OF PHILADELPHIA.
Jan. 15. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

ENGINEERS' CLUB OF COLUMBUS.
Jan. 15. Secy., M. S. Hopkins, 14½ N. High St., Columbus, O.

TECHNICAL CLUB OF OMAHA
Jan. 17. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
Jan. 17. Secy., Elbert Nexsen, 1620 S. E. 4th St., Minneapolis, Minn.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Jan. 18. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

WESTERN RAILWAY CLUB.
Jan. 18. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

IOWA ENGINEERING SOCIETY.
Jan. 19. Annual meeting, Cedar Rapids, Mich. Secy., Seth Dean, Glenwood, Ia.

BOSTON SOCIETY OF CIVIL ENGINEERS
Jan. 19. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
Jan. 19. Secy., A. Sorge, Jr., 1020 Monadnock Block, Chicago, Ill.

ENGINEERS' CLUB OF ST. LOUIS.
Jan. 19. Secy., Richard McCulloch, St. Louis, Mo.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Jan. 19. Secy., Frank H. Olmsted, Los Angeles, Cal.

NORTHWESTERN ELECTRICAL ASSOCIATION.
Jan. 19. Annual meeting, Milwaukee, Wis. Secy., T. R. Mercein, Milwaukee, Wis.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Jan. 19-20. Annual meeting. Secy., C. W. Hunt, 220 West 57th St., New York city.

OHIO SOCIETY OF CIVIL ENGINEERS AND SURVEYORS.
Jan. 19-20. Annual meeting, Columbus, O. Secy., R. M. Haseltine, Columbus, O.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
Jan. 20. Secy., C. H. McLeod, 112 Mansfield St., Montreal, Canada.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Jan. 20. Secy., F. A. Charlot, Macon, Ga.

ENGINEERS' CLUB OF CINCINNATI.
Jan. 20. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

NEW YORK RAILROAD CLUB.
Jan. 20. Secy., W. W. Wheatly, 168 Montague St., Brooklyn, N. Y.

CHICAGO ELECTRICAL ASSOCIATION.
Jan. 21. "The Art of Constructing Telephone Apparatus." Henry P. Clausen. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

INDIANAPOLIS ENGINEERING CLUB.
Jan 22. Secy., Edson F. Folsom, Indianapolis, Ind.

NATIONAL ASSOCIATION OF MANUFACTURERS OF THE UNITED STATES.
Jan. 25-27. Annual convention, New York city. Secy., Charles E. Locke, Philadelphia, Pa.

ILLINOIS SOCIETY OF ENGINEERS AND SURVEYORS.
Jan. 25 to 28. Annual meeting, at Peoria, Ill. Secy., Jacob A. Harman, Peoria, Ill.

THE WEST VIRGINIA SOCIETY OF CIVIL ENGINEERS AND ARCHITECTS.
Jan. 26. Annual meeting, Morgantown, W. Va. Secy., Wm. Steenbergen, Point Pleasant, W. Va.

AMERICAN FOUNDRYMEN'S ASSOCIATION.
Jan. 26. Annual meeting, New York city. Secy., John A. Penton, Buhl Block, Detroit, Mich.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Feb. 4. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

DENVER SOCIETY OF CIVIL ENGINEERS.
Feb. 8. Secy., Walter Pearl, 36 Jacobson Bldg., Denver, Cal.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Feb. 8. Secy. pro tem., Wm. H. Searles, Case Library Bldg., Cleveland, O.

NEW ENGLAND RAILROAD CLUB.
Feb. 9. Secy., Edward L. Jones, P. O. Box 1158, Boston, Mass.

MONTANA SOCIETY OF ENGINEERS.
Feb. 12. Annual meeting. Secy., Albert S. Hovey, Helena, Mont.

ENGINEERS' CLUB OF KANSAS CITY.
Feb. 14. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

THE ENGINEERS' CLUB OF PHILADELPHIA.—The Board of Directors, in its annual report to the society, states that during the year 18 regular meetings were held, with an average attendance of 70. The total membership is given as 432, of which 301 are resident and 131 non-resident.

ILLINOIS CLAY WORKERS ASSOCIATION.—The annual meeting was held at Decatur, Ill., Jan. 5 and 6. A number of papers were presented dealing with the manufacture of brick and tile, and it was decided that the association should make an exhibit at the State Fair. Officers were elected as follows: Pres., P. F. Townsend, of Avon; Vice-President, Henry Ammann, of Decatur; Treas., Wm. Stare, of Mendota; Secy., G. C. Stoll, of Grant Park.

BRICK MANUFACTURERS' ASSOCIATION OF THE UNITED STATES.—The 12th annual convention of this association will be held in Pittsburg, Pa., beginning Feb. 15. The principal business of the meeting will be to determine the course to be pursued in the matter of giving discounts to dealers and the advance of price for the coming year. It is stated that some $20,000,000 of capital will be represented. Mr. Xavier Wittmer is secretary, and Mr. W. H. Shoemaker, of Philadelphia, Pa., has charge of preliminary arrangements.

WESTERN SOCIETY OF ENGINEERS.—The annual meeting was held Jan. 4, at which the following officers were elected: Pres., Alfred Noble; First Vice-President, J. J. Reynolds; Second Vice-President, A. V. Powell; Secy., Nelson Litten; Treas., C. W. Melcher; Trustees, H. E. Horton, Ferd Hall and Geo. P. Nichols.

Mr. Thomas T. Johnston, the retiring President, delivered an address, taking inland navigation as his subject, and referring to the Chicago drainage canal, the Manchester ship canal, and the proposed Nicaragua ship canal.

ILLINOIS STREET RAILWAY ASSOCIATION.—This association was organized in Chicago Dec. 5, at a meeting of a number of representatives of street railway companies throughout the state. The membership will be confined to persons connected with lines in operation. The first annual meeting will be held May 18. The officers are as follows: Pres., W. H. Patterson, President of the Bloomington Street Ry., Bloomington, Ill.; Vice-President, D. B. Sherwood, Elgin City Ry., Elgin, Ill.; Secy. and Treas., C. K. Minary, Springfield City Ry., Springfield, Ill. The Executive Committee is composed of the above officers and Walter Baiker, of Peoria; E. D. Waldron, of Elgin; W. L. Ferguson, of Decatur, and B. F. Harris, Jr., of Champaign.

ENGINEERS' CLUB OF ST. LOUIS.—At the meeting, on Jan. 5, a paper was read by Mr. Richard McCulloch, entitled "An Historical Sketch of Street Railways." The development of the street railway from the first road in New York city in 1832 was traced. The early experiments, with mechanical traction, and the history of the pioneer roads was given. The general improvements in street railway construction was traced down to the present time. The local history of the St. Louis roads was then taken up. A short sketch of the omnibus lines which preceded the street railways was given, and the history of the early horse railways was outlined. The first cable roads and the early electric roads were described, and the paper closed with a review of the present condition of the street railways.

The usual discussion followed the reading of the paper.

Richard McCulloch, Secy.

OHIO SOCIETY OF CIVIL ENGINEERS AND SURVEYORS.—The annual meeting of this society will be held Jan. 19-20, in Columbus, O., in conjunction with the Ohio Institute of Mining Engineers. During the convention the following papers will be read: "A Topographical Survey of the State of Ohio," Prof. A. A. Wright; "What We Pay For," Frederick C. Keighley; "Eminent American Geologists," J. B. Morris; "The Isser vs. the Wuzzer" (some reminiscences of past and present mining, with a glimpse into the future), J. S. Doe; "Some of the Conditions Affecting the Designing of Motors for Mining Purposes," Prof. F. C. Caldwell; "Progress in Coal Unloaders During 1897," W. B. Hannon; "Surface Plants of Bituminous Collieries," W. G. Wilkins; "Gases Met with in Mining; Their Specific Gravity," Wm. Ralston; "Fire in Sunday Creek Coal Co.'s Mine No. 10," Edward H. Coxe; "The Practical Part of Electrical Haulage," D. C. Thomas; "Geology of the Jackson Shaft Coal," Andrew Roy; "Endless Rope Haulage," H. M. Morrison, and "Mistakes in Coal Mining," Wm. Hibbs. Excursions to points of engineering interest have also been arranged.

AMERICAN SOCIETY OF CIVIL ENGINEERS.—At the regular meeting held Jan. 5 a paper entitled "Experience with a New Machine for Testing Materials by Impact," by S. Bent Russell, M. Am. Soc. C. E., abstracted elsewhere in this issue, was read by the secretary. In the brief discussion which followed it was suggested that nicked test-pieces could hardly give accurate results. To measure the energy absorbed, the plan of employing a second pendulum resting against the back of the test piece was suggested.

The energy imparted to this pendulum, as indicated by its swing, deducted from that of the hammer pendulum, would give the amount absorbed in breaking the test piece.

The program for the 45th annual meeting, to be held Jan. 19-20, at the house of the society, was read. An interesting series of excursions has been planned as follows: Jerome Park Reservoir; Bowling Green Building; Columbia University; by steamer to points of interest in and about New York Harbor, and the garbage disposal plant of the New York Sanitary Utilization Co. The usual evening reception and assembly will be held the evening of the 19th, and the committee hopes that the ladies of the families of members will attend this and the excursions on the following day.

CHICAGO ELECTRICAL ASSOCIATION. — At the December meeting there was a general discussion of two or three subjects, owing to the postponement of the regular paper for the evening. Mr. Edward W. Jewell gave a short address on the uses of electricity in medicine, referring to the electrolytic infusion of cocaine into the nerves, as employed in dental work. Mr. W. A. Harding then gave a brief address on the management of the shops of electric railways, showing how work can be facilitated and the working force reduced by the application of special devices for handling heavy articles.

The following officers were elected for 1898: Pres., F. S. Hickok; Vice-President, Thomas G. Grier; Treas., E. I. Swartout; Secy., J. R. Cravath; Direceors, S. G. McMeen, L. M. Hollister and C. Wiler.

At the meeting on Jan. 7 a paper on "Electrical Shop Transmission" was read by H. G. Dimmick. The paper referred only to the application of electricity to drive line shafting, from which the countershafts and machines are driven by belts, the author considering that the application of motors to individual machines would be too expensive for general adoption. In the discussion, however, particular stress was laid upon the loss of power in transmission by shafting, especially in view of the average condition of the alinement of the shafting. There was also some discussion on the wear and maintenance of commutators and brushes.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.—The 15th annual meeting of this society was held Jan. 3. Art. III. of the Constitution was, by final vote, amended to read as follows:

Any civil, electrical, mining or military engineer, and any architect, metallurgist, assayer or surveyor, holding an appropriate degree conferred by any incorporated college or university, or any graduate of the United States Military or Naval Academies, who shall have practiced his profession for one year or longer, or who, not holding such degree, shall have practiced his profession for five years or longer, shall be eligible to membership in this society. Persons chosen from the classes mentioned in this article shall be called members.

Students of engineering and other persons who intend to adopt one or more of the branches of the profession that are mentioned in the last preceding paragraph, but who are ineligible for full membership, may be chosen as juniors. They shall have all the privileges of members except the right to vote.

Associate members may be chosen from among persons whose interest in pure science, or in the applications of science, may lead them to desire connection with the society. They shall have all the privileges of members except the right to vote.

Honorary members may be chosen. They shall be men eminent in science, or men who have conferred some signal benefit on this society. They shall be free from all fees and assessemnts.

Officers were elected for the ensuing year as follows: Pres., J. D. Estebrook; Vice-President, Oliver Crosby; Secy., C. L. Annan; Treas., A. O. Powell; Librarian, A. W. Munster; Rep. on Board of Mgrs. of the Assoc. of Eng. Soc., E. E. Woodman. The usual banquet took place at the conclusion of the business meeting. C. L. Annan, Secy.

OHIO WATER-WORKS SOCIETY. — A circular letter, dated Nov. 22, 1897, was sent to nearly all water-works superintendents and managers in the State of Ohio, requesting their advice as to the advisability of calling a meeting for the purpose of the organization of a society of Ohio of water-works officials for mutual benefit. More than 50 responses were received, all favoring the proposition, and nearly all naming Columbus as the most desirable place and the months of Jan. or Feb. as the best time for such a meeting.

We therefore call a meeting of all Water-Works Superintendents, Presidents, Secretaries, Cimmittees on Water-Works, Board of Trustees of Water-Works, Engineers and all persons directly engaged in the management and maintenance of Water-Works in the State of Ohio, to meet at Columbus, Feb. 7, 1898, at 1.30 p. m., Great Southern Hotel, for the purpose of organizing a Society of Ohio, for the benefit, education and improvement of its members in all things pertaining to the management and maintenance of water-works. It is expected that a permanent organization will be effected, constitution and by-laws adopted and officers elected for the ensuing year. It is also expected that several papers and addresses relative to the management and maintenance of water-works will be presented.

All manufacturers and dealers in water-works supplies, meters, pumps, water pipe, machinery and appliances are invited to be present with a display of their goods. Please communicate at once with C. W. Wiles, Supt. Water-Works, Delaware, O., as to the probability of your attendance, and any suggestions you have to make regarding the same.

C. W. Wiles, Supt., Delaware; T. R. Cook, Supt., Toledo; A. W. Innman, Supt., Massillon; J. O'Shaughnessy, Supt., Columbus; O. L. Hayes, Pres., Galion; John Fisher, Supt., Hamilton and many others.

## NEW PUBLICATIONS.

LITERARY MAGAZINES.—In the January "Harper's" we find a paper on "The New Northwest," by J. A. Wheelock, describing the development of the great territory stretching from Lake Superior to the Pacific. A large part of the paper is devoted to the history of the two great railways of that section, the Northern Pacific and Great Northern. In telling the story of the former the writer makes a slip in referring to "Henry W. Billings" as the man who took charge of the enterprise in 1875. As many of our readers will remember, it was the late Frederick Billings who was at the head of the work from 1875 to 1880. One of the stories of this number, "Between the Lines at Stone River," is so absurd in some of the details of its plot that it is a wonder how it found a place in such high-class a publication.

In the January "Century" is a most interesting article on "Every-day Heroism," by Gustave Kobbe, in which is told the story of men who have risked and sacrificed their lives to save others in danger. The hero who deserves greatest praise we think, and the author seems to think so too, is brave Peter Woodland, foreman of the gang of workmen who were caught in the Hudson River Tunnel when the terrible accident occurred there during the first prosecution of that work. Woodland was the first to discover the leak, but instead of going into the air lock himself first, as he might have done, he stayed to hurry his men in. Seven had passed into the lock and the eighth man was in the doorway when part of the iron roof of the tunnel at the air lock fell, pinning the man in the doorway and killing him instantly. The seven in the lock could not close the door because of the dead body. They could not open it for the roof plates held it. The escape of Woodland and the 20 men behind him was cut off, and the water began to pour into the lock through the partly open door. Woodland called to the men inside to pull off their clothes and stuff them into the crack. They did this and gained a little respite; but the air pressure still made it impossible to open the door. Through the bulls-eye in the inner end of the lock, Woodland, then up to his armpits in water, called to the men to break the outside bulls-eye. They did it, opened the door and ran up the ladder in the shaft just in time to escape the flood of water that poured after them.

Another thing in the "Century" which we think deserves note here is the publication of a fac-simile of a carrier-pigeon message sent by Andree from his balloon two days after its ascension. Many of our readers who saw the accounts of this message, which appeared in the newspapers, probably believed it was merely a newspaper "fake." It is gratifying to learn that some word was actually received from the brave explorer subsequent to his setting off on his perilous voyage.

In the "American Review of Reviews" the topics of most interest discussed are "Currency Reform" and the "Naval Power of England and the United States." There is also a summary of the progress of New York city during Mayor Strong's administration that should interest those engaged in municipal engineering.

In the "Popular Science Monthly" is an article on "The Aetiology and Geographical Distribution of Infectious Diseases," which will interest students of sanitary science, as it brings together the latest information on this subject. The author is Surgeon-General Geo. M. Sternberg, of the United States Army.

In the "North American Review" we find several interesting articles relating to the development of our export trade. Mr. Charles Denby, Jr., Secretary of the American Legation at Pekin, writes on "America's Opportunity in Asia." The "Industrial Advance of Germany" is summarized by the eminent statistician, M. G. Mulhall, and the American statistician, Worthington C. Ford, writes on "The Commercial Superiority of the United States." The "infant industries" which were so much talked of a few years ago we seldom see mentioned now. Lieut. R. C. Smith, of the Navy, explains the "conditions governing torpedo-boat design."

## TRADE PUBLICATIONS.

**(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3 1-2 x 6 ins.; 6 x 9 ins., and 9 x 12 ins.)**

ODORLESS SANITARY CARTS AND WAGONS.—U. S. Sanitary Co., 618 Pennsylvania Ave., N. W., Washington, D. C. Calendar for 1898; 3½ x 6 ins.

WATER AND GAS SUPPLIES.—Hays Manufacturing Co., Erie, Pa. Paper; 6 x 9 ins.; pp. 56; 100 illustrations.

This is a priced catalogue of all sorts of supplies for water and gas works and plumbers.

CAST-IRON WATER, GAS AND FLANGE PIPE.—Warren Foundry & Machine Co., Phillipsburg, N. J.; Sales Office, 100 Broadway, New York city. Folder; 3 x 6 ins.; pp. 10; illustrated.

This is an engraved descriptive list of pipe and specials made by the above firm. No prices are given, owing to the frequent changes in this line of goods.

PUMPS AND HYDRAULIC APPARATUS.—Rumsey & Co., Seneca Falls, N. Y. Paper; 4 x 6 ins.; pp. 192; illustrated.

A great variety of hand and power pumps are described in this pamphlet, together with various appurtenances. Some general information of value to users of such pumps is also included.

ROCK BREAKERS AND CRUSHERS.—Gates Iron Works, Chicago, Ill. Two catalogues; 6 x 9 ins.; pp. 63 and 8.

The first of these catalogues is devoted to the well-known "Gates" rock and ore breakers of the gyratory type, and shows one having a capacity of 200 tons per hour, which is said to be the largest in the world. The second catalogue is devoted to the "Invincible" crusher, of the jaw type, one portable form of which is fitted with a chain elevator carrying the crushed product up to an overhead revolving screen.

FIRE HYDRANTS AND VALVES.—John McLean, 208 Monroe St., New York city. Paper; 6 x 9 ins.; pp. 15; illustrated.

Ayers and McLean valves and hydrants are described in this pamphlet; also valve-boxes and lead joints mounted on wheels. Among the various hydrants listed are a small lawn and yard hydrant and a dock hydrant. Prices are quoted for all the goods described.

STRUCTURAL PAINT.—Rinald Bros., Philadelphia, Pa. Pamph.; 6¼ x 4 ins.; pp. 42.

This pamphlet describes the "Bessemer Paint" made by this firm for use in protecting structural iron from rust. The advantages claimed are: Freedom from oxid- and adulterations of either acid or basic nature; a cover-ing capacity that enables it to be used in a thin coat and thus insure close adherence to the iron; permanent elasticity; the binding materials are no more affected by electricity, chemical fumes or atmospheric influences than the pigment itself; flexibility, so that it will expand or contract with the iron. The pamphlet includes a number of laboratory tests of this plant and testimonials from users.

## CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

| Bids to be opened. | Work. | Place. | See Eng. News. |
|---|---|---|---|
| Jan. 13. | Tramways, cars, shackles, etc., | Chicago, Ill. | Jan. 13 |
| Jan. 13. | Water bonds ($2,000,000), | Boston | Jan. 13 |
| Jan. 13. | Arched culvert, | Cleveland, O. | Jan. 6 |
| Jan. 14. | Bonds, Pleasant Ridge, | O. | Dec. 23 |
| Jan. 14. | Pipe sewer, | Norristown, Pa. | Dec. 23 |
| Jan. 14. | Paving, | Omaha, Neb. | Dec. 23 |
| Jan. 14. | County bridges (2), | Yankton, S. Dak. | Jan. 6 |
| Jan. 14. | Sidewalks, | Omaha, Neb. | Jan. 13 |
| Jan. 14. | Macadamizing, sidewalks, | Boston, Mass. | Jan. 13 |
| Jan. 15. | Steamer repairs, | Biloxi, Miss. | Jan. 13 |
| Jan. 15. | Arc lights (500), | Richmond, Va. | Jan. 13 |
| Jan. 15. | Water and l't bonds ($15,000), | Austin, Tex. | Jan. 13 |
| Jan. 15. | Reservoir (40,000,000-gallons), | Greenville, S.C. | Jan. 6 |
| | Advertised, Engineering News, Jan. 6. | | |
| Jan. 15. | Sea wall, | Tompkinsville (S. I.), N. Y. | Jan. 6 |
| | Advertised, Eng. News, Jan. 6 and 13. | | |
| Jan. 15. | Water pipe castings, | Brookline, Mass. | Dec. 30 |
| Jan. 15. | Pier substructure, | Duluth, Minn. | Dec. 16 |
| | Advertised, Eng. News, Dec. 16 to Jan. 14. | | |
| Jan. 15. | Plumbing, etc., | Geneva, N. Y. | Dec. 30 |
| Jan. 15. | Asylum building, | San Antonio, Tex. | Dec. 30 |
| Jan. 15. | Electric light plant, | Douglasville, Ga. | Dec. 30 |
| Jan. 15. | Water-works, | Douglasville, Ga. | Dec. 30 |
| Jan. 15. | Stone sidewalks, | Sparta, Wis. | Dec. 30 |
| Jan. 17. | Grading, draining, etc., | Toledo, O. | Jan. 6 |
| Jan. 17. | Pipe sewers, | Mount Forest, Ill. | Jan. 6 |
| Jan. 17. | Sewers, | Houston, Tex. | Jan. 13 |
| Jan. 17. | Garbage destruction plant, | Darwen, Eng. | Jan. 13 |
| Jan. 17. | Water-works, | Mount Forest, Ont. | Jan. 13 |
| Jan. 18. | Repairing streets, | New Orleans, La. | Jan. 13 |
| Jan. 18. | Water pipe, castings, etc., | Philadelphia, Pa. | Jan. 13 |
| Jan. 18. | Water pipe and meters, | Jacksonville, Fla. | Jan. 6 |
| Jan. 18. | County roads (120,000 ft.), | Bedford, Ind. | Jan. 6 |
| Jan. 18. | Electric light plant, | Gloucester, Eng. | Dec. 23 |
| Jan. 18. | Court house, | De Smet, S. Dak. | Dec. 30 |
| Jan. 18. | Bonds, | New Britain, Conn. | Dec. 30 |
| Jan. 19. | Hospital building, | Los Angeles, Cal. | Jan. 6 |
| Jan. 19. | Dredging and filling, | Ellis Island, N. Y. H. | Jan. 6 |
| Jan. 19. | Brick and pipe sewers, | Buffalo, N. Y. | Jan. 13 |
| Jan. 19. | Hose wagons, | Trenton, N. J. | Jan. 13 |
| Jan. 19. | Levee work (10 miles), | Alexandria, La. | Jan. 13 |
| Jan. 19. | House of refuge, | Chatham, Ont. | Jan. 13 |
| Jan. 20. | Crossing and cobblestones, | Easton, Pa. | Jan. 13 |
| Jan. 20. | Sewer, etc., | Rochester, N. Y. | Jan. 13 |
| Jan. 20. | Hospital building, | Buffalo, N. Y. | Jan. 13 |
| Jan. 20. | Hospital cottages, | Central Islip (L.I.), N. Y. | Jan. 13 |
| Jan. 20. | Highway bridges (2), | Omaha, Neb. | Jan. 6 |
| Jan. 20. | Building plans, | Faribault, Minn. | Dec. 30 |
| Jan. 20. | Crib and breakwater, | Agate Bay, Minn. | Dec. 30 |
| | Advertised, Eng. News, Dec. 30 to Jan. 13. | | |
| Jan. 20. | Electric light plant, | Los Angeles, Cal. | Jan. 6 |
| Jan. 21. | Heating, | Portage la Prairie, Man. | Jan. 13 |
| Jan. 21. | School building, etc., | Chicago, Ill. | Jan. 13 |
| Jan. 22. | Garbage disposal plant, | Youngstown, O. | Dec. 23 |
| | Advertised, Eng. News, Dec. 23 to Jan. 13. | | |
| Jan. 24. | Grading, draining, etc., | Boston, Mass. | Jan. 6 |
| Jan. 24. | Brick sewers, | Toledo, O. | Jan. 13 |
| Jan. 25. | Doorway, | St. Louis, Mo. | Jan. 13 |
| Jan. 25. | County bridge, | Livingston, Mont. | Jan. 6 |
| Jan. 25. | Sewerage system, | Coimbra, Portugal | Dec. 30 |
| Jan. 25. | Iron stairs, etc., | Omaha, Neb. | Dec. 30 |
| Jan. 25. | School buildings, | Charlottestown, P. E. I. | Dec. 30 |
| Jan. 26. | Water-works, | Monroeville, O. | Jan. 6 |
| | Advertised, Engineering News, Jan. 6. | | |
| Jan. 26. | Mortar battery, | Seattle, Wash. | Dec. 30 |
| | Advertised, Eng. News, Dec. 30 to Jan. 20. | | |
| Jan. 26. | Court house, | Decatur, Ga. | Dec. 9 |
| Jan. 26. | Removing ashes, | Camden, N. J. | Jan. 13 |
| Jan. 26. | Repairing streets, (5 years), | Cincinnati, O. | Jan. 13 |
| Jan. 27. | Heating and ventilating, | Little Rock, Ark. | Jan. 13 |
| Jan. 27. | Artesian well, | Fort Washington, Md. | Dec. 30 |
| | Advertised, Eng. News, Dec. 30 to Jan. 20. | | |
| Jan. 28. | Collecting garbage, etc., | Minneapolis, Minn. | Dec. 30 |
| Jan. 28. | Water bonds ($21,000), | Franklin, Ky. | Jan. 13 |
| Jan. 28. | Buildings, | Denver, Colo. | Jan. 13 |
| Jan. 29. | Armor plant, | Washington, D. C. | Dec. 16 |
| Jan. 26. | Water tank trestle, | Ft. Assiniboine, Mont. | Jan. 6 |
| Jan. 31. | Grading, | Toledo, O. | Dec. 30 |
| Jan. 31. | Steel tow boat, | New Orleans, La. | Dec. 30 |
| | Advertised, Eng. News, Dec. 30 to Jan. 20. | | |
| Jan. 31. | Brick sewers, | Toledo, O. | Jan. 6 |
| Jan. 31. | Paving, curbing, etc., | Columbus, Ind. | Jan. 6 |
| | Advertised, Engineering News, Jan. 6. | | |
| Jan. 31. | Railway, | Cape of Good Hope, Africa | Jan. 6 |
| Jan. 31. | Sidewalk bonds, | College Hill, O. | Jan. 13 |
| Feb. 1. | Auditorium building, | Lawrence, Kan. | Jan. 13 |
| Feb. 1. | Macadamizing, | Passaic, N. J. | Dec. 30 |
| Feb. 1. | Power plant, | Seattle, Wash. | Dec. 30 |
| Feb. 1. | Court house, | Indianola, Miss. | Dec. 23 |
| Feb. 1. | Electric light plant, | Spring Green, Wis. | Jan. 6 |
| Feb. 1. | Church building, | Clinton, Mass. | Jan. 6 |
| Feb. 1. | Steel ferry steamers (2), | Birkenhead, Eng. | Jan. 6 |
| Feb. 2. | Water pipe (10,000 tons), | Cleveland, O. | Jan. 13 |
| Feb. 3. | Widening bridge, | Washington, D. C. | Jan. 6 |
| | Advertised, Engineering News, Jan. 6. | | |
| Feb. 5. | Steel bridge, | Cincinnati, O. | Jan. 13 |
| Feb. 5. | Water-works, etc., | Rapid City, S. Dak. | Jan. 13 |
| Feb. 5. | Sewerage system, etc., | Rapid City, S. Dak. | Jan. 13 |

Feb. 5. Water-works, Elkpoint, S. Dak. .....Jan. 6
Feb. 7. Cement sidewalks, Muncie, Ind. .....Jan. 13
Feb. 7. Grading, etc., North Stonington, R. I.....Jan. 13
Feb. 7. Motor vans (garbage), Wolverhampton, Eng.Jan. 13
Feb. 7. Locks, dam, etc., Yamhil River, Ore.....Jan. 6
Feb. 10. Advertised, Eng. News, Jan. 6 to 27.
Feb. 10. Library, Pt. Elizabeth, Cape Good Hope..Nov. 25
Feb. 15. Trunk sewer, Jersey City, N. J. .....Dec. 23
Feb. 15. Filtration plant, Albany, N. Y.....Jan. 6
Advertised, Eng. News, Jan. 6 to 27.
Feb. 21. Vault, etc., Halletsville, Tex. .....Dec. 23
Feb. 21. Extending pier, Margaree, N. S. .....Jan. 13
Feb. 21. Water supply, Jersey City, N. J. .....Jan. 13
Feb. 23. Harbor work, Pernambuco, Brazil. .....Jan. 13
Feb. 28. Railway, Henrietta, Tex. .....Jan. 13
Mar. 1. Town hall, Singapore, S. S. .....Jan. 13
Apr. 30. Plans for sewage disposal, Belper, Eng.....Dec. 16
May 1. Water power, Madras, India.....Oct. 28
July 4. Water-works bonds, etc., Mt. Kisco, N. Y...Jan. 13
No date. Water pump, De Kalb, Ill. .....Jan. 13
Advertised, Engineering News, Jan. 13.
" Fire alarm system, Mount Kisco, N. Y....Jan. 13

## RAILWAYS.

ALASKA.—Press reports from Seattle, Wash., state that the Rothschilds have decided to construct a railway to Fort Selkirk, over Chilcat Pass, and to that end have retained Henry Brattnober, a mining expert, to prepare plans for construction in the early spring. The line will be about 400 miles long, and the estimated cost of construction and equipment is $8,000,000.

ALASKA RY. & TRANSPORTATION.—A bill has been introduced into Congress by Senator Perkins authorizing this company to construct a railway in Alaska. The company was incorporated in New Jersey, Nov. 11, with a capital stock of $10,000, by H. C. Perkins, of Morristown, N. J., and others.

CANADIAN PACIFIC.—P. Alex Peterson, Ch. Engr., Montreal, Que., informs us that this company has built a new line from Ottawa to Vendreuil, but that it is not intended to build from Charlton Place to Perth, Ont., as was stated by current reports.

CANON CITY & CRIPPLE CREEK.—Reports state that the contract for building 19 miles of this proposed railway has been awarded to Louis Enricht, of Chicago, Ill. Wm. H. Burrage, Ch. Engr., Canon City, Colo.

CHILLCAT & YUKON.—This company was incorporated in New Jersey, Jan. 3, with a capital stock of $250,000, with $5,000 paid in. It is proposed to construct and operate railways, wharves, docks, etc., in Alaska. The incorporators are: Fred. S. Pearson, 654 West End Ave.; Milton G. Starrett, 451 West End Ave.; John T. Little, Jr., and W. P. Plummer, all of New York; Henry A. Robinson, Yonkers, N. Y.

COOK'S INLET, TANANA & YUKON.—A bill has been introduced in Congress to grant this company a charter to construct a railway in Alaska over government lands. Among the proposed incorporators are: Robert Rumsey, Baltimore, Md.; Geo. R. Blanchard, New York, N. Y.; Watson C. Squires, Seattle, Wash.

CUMBERLAND VALLEY.—Reports state that this company has leased the Chambersburg & Gettysburg R. R. and took charge of it on Jan. 1. The road runs from Conococheague Island, on the Mont Alto R. R., to the Adams county line, and was built by Lancaster and New York capitalists, and is but six miles long. The builders intended to strike the rich ore mines in the South Mountain and then go to Gettysburg, but the mining company which was back of the railroad failed and construction was in consequence stopped. It is said that the Cumberland Valley R. R. Co. will for the present run only occasional freight trains over the line. T. J. Brereton, Engr., Chambersburg, Pa.

DECKERSVILLE, OSCEOLA & NORTHERN.—E. M. Ford, Vice-Pres., Deckersville, Ark., informs us that 12 miles of this new line of railway is completed and in operation between Deckersville, on the Kansas City, Fort Scott & Memphis R. R., and Wardell, Ark., via Hubbard and Chelford. It is intended to extend the road through Mississippi county, Ark., and Pemiscott and New Madrid counties, Mo., to connect with the Cotton Belt Ry. at Pawpaw Junction, via Osceola and Blythesville, Ark., and Covington, Hayti, Bragadocia and Portageville, Mo., thus passing through a rich timber section. Bonds for extending the line beyond Wardell have not yet been placed and until that is done, no more building will be undertaken. The officers are: Pres., Geo. W. Decker, Newport, Ark.; Vice-Pres. and Mgr., E. M. Ford; Secy. and Treas., J. G. Webb; Road Master, T. P. Kiley, the last three of Deckerville.

EAST BROAD TOP.—Press reports state that the Berwin Coal Mining Co. has purchased the property of this railway company, including its line connecting with the Pennsylvania main line at Mount Union, and that the road will be changed to a broad gage.

EAST LOUISIANA.—E. S. Ferguson, Asst. Gen. Mgr., New Orleans, La., informs us that it is proposed to extend this railway from Covington north to the state line, a distance of about 36 miles, but as yet no route has been surveyed or decided upon. Capital necessary to carry on the construction work is now being negotiated for. Pres., John Poitevent, New Orleans.

FORT PLAIN & RICHFIELD SPRINGS.—C. B. Morris, Herkimer, N. Y., informs us that the sale of this incomplete road, which was to have taken place at Herkimer, Dec. 31, was indefinitely postponed.

GULF & BRAZOS VALLEY.—W. A. Squires, Pres., Henrietta, Tex., informs us that 100 miles of this proposed railway have been surveyed; of this section, 50 miles are now under construction, and contracts for work on the remaining 50 miles will be let on March 1. When completed the road will run from Henrietta to Velasco, via Jacksboro, Mineral Wells, and then on to Houston and Velasco, Tex., a distance of about 400 miles. At Henrietta a connection will be made with the St. Louis Air Line, and an extension built to Sapulpa, Ind. Ter., thus making a direct route from Velasco and Houston to St. Louis, Mo., through Indian Territory. H. M. Berry, Ch. Engr., Mineral Wells, Tex.

INDIANA STONE.—This company was incorporated Jan. 3, with a capital stock of $15,000. It proposes to construct a railway from Clear Creek to Harrisburg, Ind., a distance of 12 miles, running through a rich stone quarrying district. Work will commence at once. The incorporators are: Samuel Thomas, of New York; W. H. McDoel, of Chicago, and thirteen other officers and directors of the Chicago, Indianapolis & Louisville Ry. Co.

LAS VEGAS, MORA & TAOS.—This company has been incorporated in New Mexico to construct a railway 85 miles long in this territory, work upon which, it is said, will be commenced soon. The incorporators are: Edward B. Wheeler, Agent for the B. F. Butler Estate in the Mora grant, East Melton, Mass.; F. A. Manzanares and R. L. M. Ross, of Las Vegas, N. Mex.; and Richard Dunn, the tie and timber king of northeast New Mexico.

LITTLE RIVER VALLEY.—D. C. Richardson, Pres., Horatio, Ark., informs us that contracts have been let for two miles of this projected railway from Neal Springs to Nashville, via Sevier and Howard, Ark., a distance of 40 miles; and that iron has been bought for the 10 miles of road which are expected to be built within the next four months. This company was incorporated in Arkansas, Dec. 3, with a capital stock of $500,000.

MASSACHUSETTS.—Bids are asked by the treasury department of the Commonwealth of Massachusetts, until Jan. 13, for the purchase of $500,000 in bonds issued for the abolition of grade crossings in this state. Treas., E. P. Shaw, Boston, Mass.

PHILADELPHIA & READING.—Press reports state that the Little Schuylkill, an important branch of this railway in the coal region, will be double-tracked between Drehersville and Tamaqua, and East Mahanoy Tunnel, and, subsequently, from Port Clinton to Mahanoy City, all points in Schuylkill county, Pa. This will necessitate the building of about 40 miles of railroad. The Reading road is also said to be considering the feasibility of tunnelling Broad Mountain for a distance of four miles, which would greatly facilitate coal traffic, but necessitate an enormous expense.

MIAMI RIVER & BELT.—We are informed that this company was incorporated at Sidney, O., Dec. 27, to build a railway from Minster, Auglaize county, through Shelby county, via Sidney to Lake View, Logan county, a distance of 40 miles. The branch line of the Lake Erie & Western R. R., from Minster to St. Mary's, has been leased, and arrangements have been made with the Columbus Northwestern, now building, for running passenger trains over the latter road from St. Mary's to Lake View, via Wapakoneta, making a complete circuit of 80 miles. On its own line the Miami River & Belt Ry. will connect the Big Four, the Lake Erie & Western R. R., the Cincinnati, Hamilton & Dayton, the Ohio Southern and the Columbus Northwestern R. R., making a freight and passenger belt between these roads. Surveys were to begin last week, and it is expected to have the road ready for operation by July 1. The following officers were elected Dec. 30: Pres., H. T. Mathers, Sidney; First Vice-Pres., A. T. Welles, Chicago, Ill.; Second Vice-Pres., T. H. Thedieck, Sidney, O.; Secy., Frank Hunter, Sidney, O.; Treas., Chas. Timeus, Sidney, O.; Gen. Mgr., S. H. Bracey, Chicago, Ill.; Ch. Engr., John S. McNair, 704 Owings Bldg., Chicago, Ill.

SOUTHERN.—This company has filed an application for a charter at Jasper, Marion county, Tenn., seeking an extension of its line through that county. This means that the Southern will build a direct line from Stevenson, Ala., into Chattanooga, a distance of about 75 miles. Owing to the mountainous country, the work will be quite expensive. The new road will pass through Hamilton and Marion counties, in Tennessee, and Jackson county, in Alabama, which now have little or no railway facilities. C. H. Hudson, Ch. Engr., Washington, D. C.

SPRINGFIELD, LITTLE ROCK & GULF.—Reports state that McCarthy & Reichardt, of Little Rock, Ark., have been awarded the contract for grading 50 miles of this road between Little Rock and Dardanelle, Ark. P. L. Dougherty, Ch. Engr., Springfield, Mo.

TOLEDO & NORTHWESTERN.—D. C. Dunlap, Ch. Engr., Albion, Mich., informs us that the surveys have been made and most of the right of way obtained for this proposed railway. The Chicago & Clevelend Construction Co., Tacoma Bldg., Chicago, Ill., has secured the contract for constructing the road bed complete and for furnishing the equipment. When completed the line will extend from Albion to Charlotte, via Duck Lake and Brookfield, Mich., a distance of 23 miles. Pres., Gilson E. Murdock, Albion.

UTAH CENTRAL.—This company was incorporated in Utah, Dec. 29, with a capital stock of $250,000. It is proposed to buy, own, maintain, operate and further extend parts of the railways, rights, properties and franchises recently belonging to the Salt Lake & Fort Douglas Ry. Co., the Salt Lake & Eastern Ry. Co., and the Utah Central Ry. Co., of the state of Utah, which have recently been sold under judicial proceedings. The entire length of said lines, with side tracks and spurs, is about 105 miles, of which about 35 miles from Salt Lake City, in Salt Lake county, to Park City, in Summit county, are completed and in operation. The remainder of the lines covered by said franchises are unconstructed or not completed for operation. The incorporators are: Arthur E. Welby, William G. Sharp, Frank A. Wadleigh, William F. Colton, Theron Geddes, Edward J. Yard, Robert Harkness, Andrew Howat, Lemuel W. Colbath and Charles S. Davis, all of Salt Lake City, Utah.

UTAH EASTERN.—This company was incorporated in Utah, Dec. 29, with a capital stock of $250,000. It is proposed to acquire all the property of the old Utah Central Co. situated to the east and northeast of Park City, and in Summit, Wasatch and Uintah counties, the main line and branches of which cover a total distance of about 200 miles, together with the necessary spurs and sidings. The incorporators are: Arthur E. Welby, Wm. G. Sharp, Frank A. Wadleigh, Wm. F. Colton, Theron Geddes, Edward J. Yard, Robert Harkness, Andrew Howat, Lemuel W. Colbath and Stephen H. Babcock.

VINING & COLEMAN.—Will L. Vining, Pres., Austin, Tex., informs us that all the right of way for this proposed line has been secured and the steel and ties for the same have been bought. Only the contract to grub and clear has as yet been let. The necessary capital to complete the road and open up the mines to be put in operation has about been secured. When completed the line will extend from Overall Junction, on the Gulf, Colorado & Santa Fe R. R. to Vining, Tex., a distance of 30 miles. M. G. Sneed, Ch. Engr., Austin.

## STREET AND ELECTRIC RAILWAYS.

NAPLES, ME.—Reports state that the Westbrook, Windham & Harrison Electric R. R. Co. is having a new route surveyed along the shores of the Sebago Lake, passing through Songo Lock and Naples.

SACO, ME.—Francis A. Hobart, P. O. Box 1885, Boston, Mass., informs us that the surveys have been completed and all rights of way secured for this proposed electric railway from Saco to Standish, via Buxton and West Buxton, a distance of 19 miles. Plans and specifications have been prepared and contracts will be let as early as possible, so as to have the line in operation by July 1; no contracts have yet been awarded. The proposed capital stock is $250,000, and an issue of $200,000 in 30-year 5% gold bonds has been authorized. Part of the capital has been secured. Pres., E. B. Loring, P. O. Box 1885; Ch. Engr., Geo. H. Hayward, 432 Tremont Bldg., both of Boston.

PORTSMOUTH, R. I.—The Portsmouth & Middletown Ry. Co., Jan. 5, decided to accept the franchises granted to the company by the village along the proposed route, and also to erect at once a power house and a car stable in this town. It is expected to have the line in operation by June.

WORCESTER, MASS.—A franchise has been granted to the Worcester Consolidated St. Ry. Co. for the construction of an extension to Grafton. Pres., C. B. Pratt, 15 Market St.

WATERBURY, CONN.—Judge A. H. Robertson, Owner, Waterbury, Meriden & Connecticut River R. R., is reported as stating that this line will very probably be equipped with the third-rail electric system next spring.

CARNEGIE, PA.—The Carnegie, Oakdale & McDonald St. Ry. Co. has been incorporated with a capital stock of $80,000, to construct a railway to McDonald. Pres., Wm. J. Steers.

ELLWOOD, PA.—The Ellwood & New Castle St. Ry. Co. was incorporated Jan. 7 with a capital stock of $80,000 to construct a street railway from Ellwood City to New Castle, via Wampum, Newport, Moravia and Mahoningtown. The incorporators are: H. N. Marshall, J. F. Carl, J. S. Hays, J. F. Hays and S. A. Wortman.

PHILADELPHIA, PA.—A sub-committee of the city councils' street passenger railway committee has recommended the passage of ordinances permitting an extension of the 22d St. and Allegheny Ave. line across Hunting Park Ave. and Nicetown Lane, and of the Chelten Ave. line from its present terminus to the old York Road.

CHARLESTON, W. VA.—The Charleston St. Ry., which has about 6 miles of track in this city, is being rebuilt and is expected to be ready for operation in five or six weeks. J. D. Campbell, Treas. and Gen. Mgr., 215 Kanawha St.

WHEELING, W. VA.—We are informed that the right of way has been secured and the surveys practically completed for the reconstruction of this electric line, running from Wheeling to Elm Grove. There are 7 miles of double track between the termini. Contracts for the construction of the road will be let about Feb. 15, as all the necessary capital has been secured. Pres., Anton Reymann; Engrs., Brown & Hazlett, Wheeling.

LAKE CHARLES, LA.—It is announced that the Lake Charles St. Ry. Co. has decided to operate its lines by electricity; the storage battery system will probably be adopted. Pres., Adolph Meyer.

ALEXANDER, IND.—The Union Traction Co. has completed the building of its line between Alexander and Anderson, a distance of 12 miles. The completion of the road to Summitville, Fairmount and Marion has been deferred until spring, owing to the bad weather.

NILES, MICH.—H. A. Chapin & Son, of this city, are said to contemplate the building of an electric railway between Niles and South Bend, Ind. They have already made specifications. Chapin & Son own the South Bend electric light plant, and if the road is built power will be derived from the plant.

CHICAGO, ILL.—The incorporators and first board of directors of the Chicago Electric Traction Co., recently incorporated, and which contemplates the construction and operation of about 100 miles of street railways, in the southwestern part of the city and in the suburbs, are: Charles R. Holden, 507 West Monroe St.; Carl Meyer, 2909 Prairie Ave.; William L. Tibbs, 6849 Ellis Ave.; Thomas A. Moran, Jr., 4710 Vincenne Ave.; Alfred S. Austrian, 3129 Michigan Ave. and E. R. Gilbert, all of Chicago; Samuel B. Shipley, Philadelphia, Pa.; Isaac L. Rice, New York, N. Y.; Henry Levis, Philadelphia, Pa.; Gustave J. Wetzler and Julius S. Bache, of New York.

GALESBURG, ILL.—The construction of an electric railway between Galesburg and Monmouth is being considered; surveys are now being made. Fred Seacord, Pres. Galesburg Electric Motor & Power Co., is among those interested.

ROCKFORD, ILL.—The Rock River Electric Ry. Co. has decided on the route for its proposed line to be built in the spring, from this city to Byron, via Dells. It is said that contracts are now ready to be awarded. The officers are: F. M. Hopkins, 33 Monroe St., Chicago, Ill.; Vice-Pres., J. G. Jones, Oregon, Ill.; Secy., J. S. Ticknor, Rockford; Treas., Charles Schneider, Oregon, Ill.

MILWAUKEE, WIS.—It is reported that the Milwaukee Electric Ry. & Light Co. will extend its lines in this city at a cost of about $250,000, including lines to Waukesha and Whitefish Bay. A brick power house will be built at Oneida and River Sts., and will cost, with its equipment, about $450,000. Starke & Co. have already been awarded the contract for the driving of from 1,500 to 1,900 piles on the site upon which the power house will be erected. Mgr., J. I. Beggs.

OSHKOSH, WIS.—Jas. K. Tollotson, Secy. Citizens' Traction Co. is reported as stating that arrangements have been almost completed for the building of an electric line to Neenah, independent of the Appleton and Neenah line, now being constructed.

WAUPAUCA, WIS.—Robert Winn and Paul H. Sanborn have applied to the council for a franchise, according to reports, for the construction of an electric street railway in this city. C. G. Burbank, Cy. Clk.

ST. PAUL, MINN.—The St. Paul City Ry. Co. has been authorized by the council to change its 4th St. and Selby cable line into an electric line; the said double-track electric line to be built and operated by June 30. Vice-Pres., C. A. Goodrich.

LINCOLN, NEB.—Press reports state that the Lincoln St. Ry. system has been sold under foreclosure and was bid in by first and second mortgage bondholders, represented by the New York Security & Trust Co. and the New York Guarantee & Indemnity Co., the price paid being $60,500, subject to paying taxes of not less than $40,000.

KANSAS CITY, MO.—It is reported that the Metropolitan St. Ry. Co. will change its Fifth St. cable line to electric.

ST. LOUIS, MO.—The Union Depot Ry. Co. contemplates an extension of its line to Walnut Park and Ferguson, according to reports, a distance of 4 miles. John Scullin, Gen. Mgr.

LOS ANGELES, CAL.—The Los Angeles Pacific R. R. Co. has been incorporated in California, with a capital stock of $1,000,000, to acquire the property and rights of the Pasadena & Pacific Ry. Co. of Arizona and the Pasadena & Pacific R. R. Co., of California, and to construct and maintain a single or double-track steam or electric railway from Los Angeles to Santa Monica. The directors are: E. P. Clark, W. D. Larrabee, W. Gillellen, M. E. Hammond, J. H. Spires and others.

## ELECTRIC LIGHT AND POWER.

BANGOR, PA.—Press reports state that the boiler and engine house of the East Bangor Consolidated Slate Co., East Bangor, was destroyed by a fire Jan. 1, causing a loss of $1,000. A new power house will be erected and equipped.

GLOUCESTER, MASS.—The aldermen have passed an ordinance authorizing the committee to investigate the question of a municipal plant, according to reports.

MILFORD, MASS.—Stone & Webster, Elect. Engrs., 4 Post Office Square, Boston, have prepared plans and received estimates for remodelling the plant of the Milford Electric Light & Power Co. No contracts have yet been awarded.

ALBANY, N. Y.—Local papers state that the water board is considering the advisability of an electric plant to be used at the filtration plant for lighting and power purposes. The cost of the construction of the plant will be about $30,000. No definite action will be taken until the contracts for the new sedimentation basin and filtration reservoir are awarded.

SALEM, N. Y.—E. W Philo is said to have been awarded the contract for constructing a plant for the Salem Electric Light Co.

TONAWANDA, N. Y.—An election will soon be held to vote on the question of constructing works to cost about $16,000.

OBERLIN, PA.—The residents of this place and Enhant are said to have petitioned the Steelton Heat, Power & Light Co. to extend its wires to these places.

WILLIAMSPORT, PA.—We are informed that there is before councils a resolution to submit the question to the voters of issuing $45,000 in bonds for a plant. It will have 250 lights of 2,000 c. p. L. R. Conkrite may be addressed.

SEAFORD, DEL.—The question of constructing a plant is being considered, according to reports.

WASHINGTON, D. C.—The contract for putting in electric wire conduits and wires for the new electric plant of the city post office has been awarded to the Southern Electric Co., Baltimore, Md., the lowest bidders, for $20,650. The contract for putting in the entire electric light and power plant will soon be let. The following bids have been received for placing interior conduits in the building for conveying telephone wires: Southern Electric Co., Baltimore, $2,150; Chesapeake Telephone Co., Washington, $2,755; Royce & Marean, Washington, $1,429.

CUMBERLAND, MD.—W. B. Clark, Cy. Clk., informs us that the following bids were received Jan. 4 for constructing an electric light plant, to have 175 arc lights and two dynamos of 250 light capacity:

| | Div. 4. | Div. 5. | Total. |
|---|---|---|---|
| Maryland Mfg. & Construction Co., Baltimore, complete.. .. ..... | .... | .... | $19,987 |
| Westinghouse Co., Pittsburg..... | $6,295 | $6,795 | 13,090 |
| Ft. Wayne Electric Corporation, Ft. Wayne, Ind.. .. ..... | 7,572 | 8,300 | 15,872 |
| *Ambos Electric Construction Co., Cleveland, O., Divisions 2, 3, 4 and 5..... .... .... | | | 16,978 |

*Awarded contract. The work must be completed by July 1, under penalty of $500 and $10 a day until completion. Two bonds of $20,000 each are said to have been deposited by the successful bidders.

HAGERSTOWN, MD.—The question of constructing a municipal plant or of granting a franchise is being considered. Estimated cost, $30,000 to $85,000. There is also under consideration the construction of a subway for light, telephone and telegraph wires.

RICHMOND, VA.—Bids are asked until Jan. 15 for furnishing 500 arc lights of 1,200-c. p., with the privilege of increasing to 600, for a term of three years, with the privilege of extending for two years. Wm. P. Knowles, Supt. Gas Works.

BRUNSWICK, GA.—It is reported that City Attorney Kay has rendered a decision entitling the city to annul its contract with the Brunswick Light & Water Co. It is probable a plant and water-works will be built by the city.

FERNANDINA, FLA.—The council will probably soon ask for bids for constructing a new power plant, according to reports.

CANTON, O.—The water-works trustees have instructed the secretary to secure estimates, etc., for lighting the pumping station and also for furnishing a motor, etc.

CANAL FULTON, O.—Eck & Bros., of Eaton, O., are said to have been granted a 12-year franchise for lighting the streets at $800 a year. Work on the plant has been begun.

CINCINNATI, O.—The Bullock Electrical Mfg. Co., Cincinnati, according to reports, is contemplating the construction of a new power plant, to be about 100 × 200 ft., which will develop a capacity of about 1,000 HP.

GIBSONBURG, O.—An election is reported to have been held Jan. 11 to vote on the question of issuing $13,000 in bonds for the purchase of the plant.

HURON, O.—C. M. Rarg, Mayor, writes us that nothing has yet been done in regard to a plant, but the town will probably put in a plant before long.

CHICAGO, ILL.—Judge Tully has granted an injunction restraining Comptroller Waller from awarding the contracts for extending the municipal plant at a cost of $150,000, as stated, with a list of the bidders, in our issue of Dec. 30.

GRANITE CITY, ILL.—The Granite City Electric Light Co. has submitted a bid to furnish 10 2,000-c. p. lights at $100 a year each.

HOMER, ILL.—A 20-year franchise for an electric light plant and a contract for street lights was granted by the village on Jan. 3 to J. D. Wallace, Champaign, Ill.

LANCASTER, WIS.—The council is reported to have granted an electric light franchise.

MARINETTE, WIS.—Press reports state as follows: The power at Chappie Rapids, on the Menominee River, is to be developed by the Marinette & Menominee Electrical Co., which has been incorporated, as noted under New Companies. There is estimated to be 3,000 HP. at the rapids, and the company will use 2,700 HP., which has been bargained for at Marinette and Menominee. The dam will be built this winter, and the rest of the improvements made in the spring. Estimated cost, $150,000. It is thought that this is but the forerunner of greater improvements, as there are two other rapids on the Menominee River and one on the Peshtigo River, all near enough to be utilized in Marinette and Menominee, and it is thought that these will be improved. They represent an aggregate of 10,000 HP. It is said that several large manufacturing concerns are waiting for this power to be developed to start in business in the two cities. C. B. Pride, Elec. Engr., Appleton, Wis., will probably get the contract for constructing the dam at a cost of $30,000. S. M. Stephenson, Menominee, Mich., is interested.

SAUK CENTRE, MINN.—It is reported that the council will arrange at once for the construction of a plant and water-works. Councilmen Ransom Buck and Geo. Ingram may be addressed.

HASTINGS, NEB.—Chas. G. Lane, owner light plant, writes us that there was but slight damage done to the light station by the recent fire, noted in our issue of last week. All repairs have been made.

KEYTESVILLE, MO.—It is reported that an election was held Jan. 11 to vote on the question of issuing $5,000 in bonds for extending the light plant and water-works.

SEDALIA, MO.—The council has passed an ordinance for the improvement, extension and development of the Sedalia Electric Light & Power Co.'s plant, agreeing to renew the company's contract for lighting the streets for five years, on the condition that the company expend $50,000 before August in improving the railway and light service.

FORT SMITH, ARK.—D. B. Sparks, Cy. Clk., writes us that the council rejected the bids received Jan. 1, for furnishing 70 arc lights for 10 years. The council met Jan. 10 to take action in the matter. Jas. B. Gass, Cy. Engr.

PARRSBORO, N. S.—It is proposed to spend $8,000 for an electric light plant, according to reports.

ST. PETERSBURG, RUSSIA.—Press reports state as follows: The St. Petersburg Co. for the Electrical Transmission of Power from Waterfalls is being organized to build plants for the utilization of the Narowa Imatra and Wuozen waterfalls, in the generation of electrical power, and to transmit to and distribute the same in St. Petersburg and surrounding districts for electric lighting and power purposes; capital stock, $2,000,000. The purchases of both machinery and supplies will begin early in April.

NEW COMPANIES.—Middletown Gas & Electric Light Co., Middletown, O.; $50,000; Charles E. Denny, W. F. Simpson, W. O. Barnitz, T. E. Reed, J. J. Gallagher, F. M. Peaks Island & Light Co., Portland, Me.; $50,000, with $650 paid in; to acquire and operate water-works and light plants; Pres., Richard K. Gatley, Portland; Treas., Charles C. Douglass, Portland, Me.

Overmont Water & Power Co., Boulder, Colo.; $90,000; William Babcock, Mary C. Babcock, Amanda E. Campbell, James B. Maybarge.

Marinette & Menominee Electric Co., Marinette, Wis.; $200,000; to build a dam at the Chappee Rapids, four miles above the city, and furnish power to street railways, mills, factories, etc., in the cities of Menominee and Marinette. Work will be begun at once. Isaac Stephenson, John Spalding, Chicago; Fred Carney, A. C. Merriman, F. M. Brown, H. C. Higgins, G. W. Hanley, Marinette; Edward Daniel Spies, Augusta Spies, S. M. Stephenson, Menominee, Mich.

West Orange Electric Light & Power Co., West Orange, N. J.; $100,000, of which $1,200 is paid in; Frank Brewer, Albert P. Condit, West Orange; John O'Rourke, Orange; Jay Ten Eyck, Newark, N. J.; Alfred F. Skinner, Franklin, N. J.; James C. O'Brien, South Orange.

Nashville Electric Light Co., Nashville, Tenn.; Col. C. M. McGhee, L. D. Tyson, Nashville.

Jordan River Electric Generating Co., Salt Lake City, Utah; amending its incorporation, where the corporate name was changed to the Salt Lake Water & Electric Power Co.; $1,000,000; Pres., Allen G. Lamson; Secy., C. W. E. Stevens. The company is perfecting arrangements to furnish electricity for power and light for Mercur, also for Bingham. We are informed that contracts have been placed and that construction is well under way. About 5,000 HP. will be furnished.

Kerrville Electric Light, Heat & Power Co., Kerrville, Tex.; $10,000; Charles Schreiner, A. C. Schreiner, L. A. Schreiner.

Manhattan Electric Co., St. Louis, Mo.; $4,500; Elliott Jones, A. E. Boehenstein, G. J. Percival.

Chestertown Electric Light & Power Co., Chestertown, Md.; $15,000; A. H. Tracey, W. J. Hoffman, J. K. Wright, W. B. Cooper, W. W. Beck.

Story Electric Co., Chicago, Ill.; $10,000; W. H. Utt, G. W. Oberlander, Eric Winters, 610 Tacoma Bldg., Chicago.

Carson Electric Light Co., Carson, Ia.; the capital stock is placed at $5,000, with power to raise to $10,000; F. J. Reid, Pres.; J. S. Campbell, Secy.; D. A. Snapp, Treas.; William Hotze, Mgr.

Monongahela Valley Electric Co., Speers, Washington county, Pa.; Jan. 11; $1,000; Treas., Geo. B. Motherell, Pittsburg, Pa.; directors, Ernest A. Beach, Winfield B. Carson, Pittsburg.

## BRIDGES.

NEW HAVEN, CONN.—Reports state that Lathrop & Shea, South Norwalk, Conn., have been awarded a contract, at $35,000, to construct an arch 30 ft. in diameter and 160 ft. long beneath the Cobalt viaduct on the Air Line Ry.

ALBANY, N. Y.—We are informed that plans will be submitted this week by the state engineer to the board of public works for lift bridges over the Erie Canal at Salina St., Syracuse; at Whitesboro St. and Broad St., Utica; and a fixed bridge at South Clinton St., Rochester.

PORT WASHINGTON (L. I.), N. Y.—The Carnegie Steel Co., Pittsburg, Pa., has been awarded a contract for the construction of a steel viaduct, four steel highway bridges and a double span bridge on the new extension of the Long Island Ry. W. A. Cattell, Engr., 26 Court St., Brooklyn.

WASHINGTON, D. C.—Plans have been submitted for the proposed bridge at Connecticut Ave., over Rock Creek, by L. L. Buck, New York; G. S. Morison, Chicago, and W. H. Breithaupt, New York. To cost about $1,000,000 in granite, $900,000 in sandstone and $700,000 in concrete.

WASHINGTON, D. C.—Reports state that the secretary of war has recommended the construction of a new bridge to replace the old one across the Aqueduct.

ATLANTA, GA.—We are informed that Mayor Collier has recommended an appropriation of $50,000 toward the construction of a viaduct across the railway tracks at Mitchell St.

GAINESVILLE, GA.—Reports state that a county bridge 200 ft. long will be constructed at Keith's Ferry, to cost about $3,000.

GREENWOOD, TENN.—The Groton Bridge Mfg. Co., Groton, N. Y., has been awarded a contract at $23,988 for constructing an iron draw bridge across the Yazoo River.

CINCINNATI, O.—Bids are asked until Feb. 5 for the construction of a wrought-iron or steel Pratt truss bridge over Eight Mile Creek on Eight Mile Road, Anderson township. Eugene L. Lewis, County Audr.

CLINTON, IND.—A proposition to construct a bridge at an estimated cost of $12,000, across the Wabash River, will be put to vote Feb. 3, according to reports.

MUNCIE, IND.—Reports state that the Indiana Bridge Co., Muncie, will increase its capital stock from $30,000 to $50,000. F. F. Rose, Pres.; Geo. F. McCullock, Secy.

PLAINFIELD, MICH.—It is reported that Supervisor Carlisle has recommended on ordinance to be put to vote at the spring election for the appropriation of $10,000 for the construction of a bridge where the Plainfield Road crosses the river.

CHICAGO, ILL.—Press reports state as follows: Contracts for the construction of a movable bridge were let Jan. 11 by the sanitary district to the King Bridge Co. The bridge, which will cross the channel just south of 31st St., will have the great length of 410 ft., a width of 116 ft., a weight of 3,800 tons, and will cost $225,000. It will be an 8-track structure, and will be used by the Union Stock Yards & Transit Co., with two tracks; the Chicago & Northern Pacific, with two tracks, and the Pen Handle, with four tracks.

CHICAGO, ILL.—The trustees of the sanitary district have awarded to the Carnegie Steel Co., Pittsburg, Pa., the contracts for two drawbridges to carry the Atchison, Topeka & Santa Fe Ry. over the drainage canal. Bridge at 26th St., $44,242; bridge at Summit, $51,040. The lists of bids were given in our issue of Dec. 30. The trustees also awarded to the Massillon Bridge Co., of Massillon, O., the contract for the Lyons and Summit road bridge at $3,500.

CHICAGO, ILL.—Maj. W. L. Marshall, U. S. Engr., Chicago, received the following bids Dec. 29 for furnishing and erecting the superstructure and manufacture of five steel highway bridges over the Illinois & Michigan Canal for which there is $15,000 available, as advertised in Engineering News:

| Bidder. | Total. |
|---|---|
| Toledo Bridge Co., Toledo, O. ..... | $8,200 |
| La Fayette Bridge Co., La Fayette, Ind. .. .. ..... | 6,962 |
| King Bridge Co, Cleveland, O..... | 10,745 |
| Ft. Pitt Bridge Works, Pittsburg, Pa. .. .. ..... | 13,000 |
| A. J. Tullock, Leavenworth, Kan..... | 12,440 |
| Stupp Bros. Bridge & Iron Co., St. Louis .. .. ..... | 7,350 |
| Wisconsin Bridge & Iron Co., Milwaukee .. .. ..... | 9,740 |
| J. G. Wagner Co., Milwaukee, Wis..... | 8,800 |
| Massillon (O.) Bridge Co. .. .. ..... | 9,650 |
| Joliet Bridge & Iron Co., Joliet, Ill..... | 9,000 |
| Youngstown (O.) Bridge Co. .. .. ..... | 7,750 |
| Penn Bridge Co., Beaver Falls, Pa..... | 6,850 |
| Pittsburg Bridge Co., Pittsburg, Pa. .. .. ..... | 10,000 |
| Kenwood Bridge Co., Chicago, Ill. .. .. ..... | 9,500 |

Kind of bridge.—(a) low truss, steel; (b) low plate-girder; (d) steel, standard conections; either pin or riveted; (f) medium, pin; (g) steel low truss, pin; (i) low truss, riveted; (k) medium steel, pins or low truss, riveted; (m) medium steel, pony truss, riveted; (n) soft steel, pony truss, riveted.

LONDON, O.—We are informed that the following bids were received Jan. 4 for constructing three bridges in Madison county. Geo. W. Clark, Deputy County Auditor, H. L. McCafferty, Engr.:

| | 1st Bridge. | 2d Bridge. | 3d Bridge. |
|---|---|---|---|
| Champion Bridge Co., Wilmington, O. .. .. ..... | $2,530 | $1,... | $1,... |
| Iron Substructure Co., Columbus, O | 1,975 | ... | 1,... |
| Oregonia Bridge Co., Oregonia, O. | 2,487 | ... | 1,... |
| Bellefontaine Bridge & Iron Co., Bellefontaine, O.. .. .. ..... | *1,000 | ... | 1,... |
| St. Louis Bridge & Iron Co., St. Louis, Mo.. .. .. ..... | 2,350 | ... | 1,... |
| Pittsburg Bridge Co., Pittsburg.. | 2,538 | ... | 1,... |
| Penn Bridge Co., Beaver Falls, Pa. | 2,485 | ... | 1,... |
| Brackett Bridge Co., Cincinnati, O. | 2,199 | ... | 1,... |
| Variety Iron Works Co., Cleveland, O.. .. .. ..... | 2,300 | ... | 1,... |
| Youngstown Bridge Co., Youngstown, O.. .. .. ..... | 2,535 | ... | 1,... |
| Massillon (O.) Bridge Co. ..... | 2,165 | ... | **1,... |
| Groton (N.Y.) Bridge & Mfg. Co.. | 2,650 | ... | 1,... |
| Lafayette Bridge Co., Lafayette, Ind.. .. .. ..... | 2,300 | ... | 1,... |
| Cincinnati Bridge Co., Cincinnati, O.. .. .. ..... | 2,490 | ... | 1,... |
| Toledo Bridge Co., Toledo, O.... | 2,215 | ... | 1,... |
| Thatcher A. Parker, Terre Haute, Ind.. .. .. ..... | 3,410 | ... | 1,... |
| New Columbus Bridge Co., Columbus, O.. .. .. ..... | 1,999 | *... | 1,... |
| King Bridge Co., Cleveland, O.... | 1,992 | ... | **... |
| Canton Bridge Co., Canton, O.... | 2,583 | ... | 1,... |
| Wrought Iron Bridge Co., Canton, O.. .. .. ..... | 2,385 | ... | 1,... |
| Indiana Bridge Co., Muncie, Ind. | 1,960 | ... | 1,... |
| Indianapolis Switch & Frog Co... | 2,814 | ... | 1,... |
| Geo. W. Knopf, Pittsburg..... | 2,670 | ... | 1,... |

*Awarded contract. **Superstructure only.

WAPELLO, IA.—A contract has been awarded to the Missouri Valley Bridge & Iron Works, Leavenworth, Kan., at $45,000, to construct a steel caisson bridge over the Iowa River at this place.—The county supervisors are said to have granted a petition signed by 1,800 persons for the construction of a wagon bridge across the Iowa River one mile north of here.

SIOUX CITY, IA.—The council on Jan. 6 decided to have brick arches constructed over the new suction mains at the Main St. pumping station, at an estimated cost of $5,000. C. J. Davidson, Engr.

DULUTH, MINN.—The board of public works has found it necessary to make extensive repairs or else replace the bridge at 40th Ave. West, 43d Ave. West and Fremont St. D. A. Reed, Cy. Engr.

MILWAUKEE, WIS.—The Wisconsin Bridge & Iron Co., Milwaukee, has been awarded a contract at $1,007 to repair the Grand Ave. bridge.

TRIM BELLE, WIS.—The following bids were received Jan. 6 for constructing a 70-ft. by 16-ft. steel span bridge with 16 ft. approaches on steel tubes:

| | |
|---|---|
| Newell & Stack, New Richmond, Wis. | $978 |
| Dibley & Robinson, Minneapolis, Minn. | 1,075 |
| Clinton Bridge & Iron Works, Clinton, Ia. | 945 |
| Milwaukee Bridge Works, Milwaukee, Wis. | 1050 |
| Gillette-Herzog Mfg. Co., Minneapolis, Minn. | 1025 |
| Wisconsin Bridge & Iron Co., Milwaukee, Wis. | 965 |
| Chicago Bridge & Iron Co., Chicago, Ill. | 994 |
| King Bridge Co., Cleveland, O. (accepted) | 895 |

YANKTON, S. DAK.—Bids are asked until Jan. 14 for constructing two bridges, according to reports. J. H. Pierson, County Audr.

TEXARKANA, TEX.—We are informed that a pile bridge will be constructed across the Sulphur River. The work is in charge of M. D. Tilson, Texarkana. It will be 240 ft. long. Other pile bridges are also proposed.

SHELTON, WASH.—Reports state that the freshets have damaged a number of bridges and swept away one bridge at a loss of $3,000.

LOS ANGELES, CAL.—Reports state that the California Bridge Co., San Francisco, has been awarded a contract, at $31,689, to construct a county bridge over the Santa Clara River.

RIVERDALE, UTAH.—The county commissioners have accepted plans and specifications prepared by Engineer Bostaph for the construction of a new bridge at this place and Commissioner Seaman has been authorized to advertise for bids, according to reports.

## BUILDINGS.

BOSTON, MASS.—The question of issuing $300,000 in bonds for the erection of a new police headquarters is being discussed, and it is said that Mayor Quincy will recommend the building of the same.—The contract for erecting a large retail store building for the Francis estate at Bedford and Chauncey Sts., and Avon Place, to be occupied by Jordan, Marsh & Co., has been let to the George A. Fuller Construction Co., of Chicago, Ill. The cost will be about $400,000.

SOMERVILLE, MASS.—Bids will soon be asked, according to reports, for the erection of a 4-story brick and stone apartment building to be built by the New England

Improvement Co., 46 School St., Boston, at Washington and Linwood Sts., at a cost of about $45,000. Arch., W. J. J. Garrity, Tremont Place, Boston.

WORCESTER, MASS.—Two 5-story brick and stone apartment buildings will soon be erected on Murray Ave. by James Miller & Son, Builders, State Mutual Bldg.; estimated cost, $40,000 each. Archs., Johnson & Johnson.

BRIDGEPORT, CONN.—Alderman Banks is the chairman of a committee of the board of aldermen to consider plans for the enlargement of the city hall, or for a possible new building. Enlargement would cost $50,000, and a new structure about $150,000. Mr. Longstaff, 269 Railroad Ave., Bridgeport, Consulting Arch.

ALBANY, N. Y.—Reports state that the St. John's Roman Catholic Church will soon erect a large stone church building on Green St.

BROOKLYN, N. Y.—Plans have been accepted for the proposed new Erasmus High School Building to be erected in this borough at a cost of about $300,000. Arch., J. Graham Glover, 186 Remsen St.

BUFFALO, N. Y.—We are informed that competitive plans will soon be asked for a third high school building to be erected here.——Grace & Hyde Co., 26 East 42d St., New York, N. Y., and Chicago, Ill., was awarded the contracts Jan. 4 for erecting the main or permanent buildings of the Pan-American Exposition. The contract price calls for the expenditure of something more than $700,000, and the buildings to be constructed under the agreement are those which will form the main structures for exhibition purposes. Work will be begun immediately. Pres., Capt. John M. Brinker.——C. Berrick's Sons, of Buffalo, were awarded the contract, Dec. 31, for erecting the new armory building of the 74th Regiment, in this city, at $335,585. Fourteen bids were received for an armory of brick or stone. The lowest bid for a brick armory was made by Jonathan Clarke's Sons, of Chicago, Ill., at $286,000; the lowest for the same in stone was submitted by J. Churchyard, of Buffalo, at $321,414. The only bid for a Medina stone building was that submitted by C. Berrick's Sons. Capt. William Lansing, Resident Arch.——Hitchings & Co., of New York, have been awarded the contract for building the new conservatory in South Park, at $91,635.

BUFFALO, N. Y.—Bids are asked until Jan. 20, for the mason work, structural metal work, heating, etc., required in the construction of the German Hospital Building, at 736 to 748 Jefferson St. Jacob Stern Chn. Bldg. Com.; Geo. J. Metzger, Arch., 19 West Huron St., Buffalo.

CENTRAL ISLIP (L. I.), N. Y.—Bids are asked, until Jan 20, for the materials and labor required in erecting three cottages at this place for the Manhattan State Hospital. Henry E. Howland, Pres. Bd. Mgrs., 1 Madison Ave., New York, N. Y.; I. G. Perry, State Arch., Albany, N. Y.

NEW YORK, N. Y.—The following bids were received by the board of education Jan. 11 for constructing a new building for Public School No. 168, on 104th and 105th Sts., between 1st and 2d Aves.:

| | |
|---|---|
| P. J. Walsh, 503 5th Ave. | $296,444 |
| Murphy Bros., 407 East 101st St. | 298,700 |
| Harry McNally United Charities Building | 301,000 |
| Luke A. Burke & Co., West 59th St. | 301,900 |
| John J. Huffer, 215 West 125th St. | 304,700 |
| Thomas Dwyer, Temple Court | 307,977 |
| P. Gallagher, 156 5th Ave. | 310,999 |
| John H. Reeves, United Charities Building | 311,000 |
| Chas. A. Cowan, 289 4th Ave. | 317,984 |
| Quincy & Crawford, New York | 323,797 |
| T. Ceckerill & Son, 550 West 41st St. | 324,000 |
| Mapes-Reeve Construction Co., 150 Nassau St. | 330,000 |

The following bids were received by the board of education Jan. 11 for the heating and ventilating, also electric lighting plant, in Public School No. 42, at Hester, Ludlow and Orchard Sts.:

| | |
|---|---|
| Blake & Williams, 362 West Broadway | $23,548 |
| Wm. X. Tobin, Syracuse, N. Y. | 23,963 |
| Huey Bros. | 23,987 |
| N. Y. Steam Fitting Co., 203 Grand St. | 23,990 |
| E. Rutzler, 178 Centre St. | 24,100 |
| Frank Dobson, 218 East 42d St. | 24,105 |
| Baldwin Engineering Co., 106 Beekman St. | 24,444 |
| Foskett & Bishop Co., 62 Grand St. | 24,500 |
| G. A. Intee Co., 112 Wooster St. | 24,636 |
| Wells & Newton Co., 235 Eldridge St. | 24,685 |
| Evans-Almiral Co., 44 Dey St. | 25,335 |
| Jas. Curran Mfg. Co., 512 West 36th St. | 25,500 |
| Wallace & Carey, 131 4th Ave. | 25,826 |
| Gillis & Geoghegan, 537 West Broadway | 25,925 |

NEW YORK, N. Y.—Plans have been filed by Leopold Kahn Co., 2213 7th Ave., for a 7-story brick flat building at 137th St. and 7th Ave., to cost $105,000. Arch., Henry Anderson, 1180 Broadway; by the city for a 6-story brick school building at Monroe and Market Sts., to cost $220,000. Arch., C. B. J. Snyder, 585 Broadway; by Jacob Fischel, 197 Henry St., for a 6-story brick flat building at 216 Clinton St. and 257 and 259 Madison Ave., to cost $50,000. Archs., Horenburger & Straub, 122 Bowery; by William Call, 107 West 90th St., for a 6-story brick and stone flat building at 327 West 83d St., to cost $75,000. Arch., H. E. Hartwell, 156 5th Ave.; by James B. Vreeland, 70 South St., for three 6-story brick flat buildings at 532 to 536 West 44th St., to cost $84,000. Arch., E. B. Chestersmith, 45 Exchange Place; by Felix Krupp, 27 Morningside Ave., for a 5-story brick flat and store building at 82d St. and Park Ave., to cost $50,000. Arch., Gilbert Robinson, 215 West 125th St.; by the Knickerbocker Realty Improvement Co., 156 Broadway, for a 12-story brick hotel at 116 to 120 34th St., to cost $500,000. Arch., Ralph S. Townsend, 29 East 19th St.; by Michael Hanlon, 122 Bowery, for an 8-story brick business building at 174 Wooster St., to cost $50,000. Arch., Martin Johnson, 122 Bowery; by Wm. M. McCarty, 138 West 103d St., for two 5-story brick and stone flat buildings on 106th St., near Manhattan Ave., to cost $100,000. Arch., Frank A. Moore, 123 East 23d St.; by W. E. D. Stokes, Astoria Hotel, for a 14-story brick and stone flat and store building at 73d St. and the Boulevard, to cost $800,000. Arch., John R. Hinchman, 393 West End Ave.; by the Germania Bank, 215 Bowery, for a 6-story brick bank building at the Bowery and Spring St., to cost $200,000. Arch., Robert Maynicke, 725 Broadway; by Wm. V. W. Graham, 1238 Madison Ave., for six 4½-story brick dwellings on 82d St., west of Park Ave., to cost $108,000. Arch., Thomas Graham, 1238 Madison Ave.; by S. W. B. Smith, 323 Lenox Ave., for a 7-story brick flat building on 70th St., west of Columbus Ave., to cost $120,000. Archs., Neville & Bagge, 217 West 125th St.; by Wm. L. Mathat, 132 Nassau St., for ten 3-story brick dwellings at 181st and Vyse Sts., to cost $120,000. Arch., Thomas Graham, 1238 Madison Ave.; by Felix Phillips, 25 Chambers St., for three 6-story brick tenement and store buildings at 233 to 237 Cherry St., to cost $60,000. Arch., S. Sass, 25 Chambers St.; by F. A. Reene, Inwood, N. Y., for four 5-story brick flat and store buildings at 68th St. and West End Ave., to cost $64,000. Arch., C. E. Reid.——The following were the lowest bidders, Jan. 7, for work to be done for the department of charities: Christopher Nally Co., 102 West 81st St., for receiving and ferry house at City Hospital landing, Blackwell's Island, $6,900; J. A. Rennie, 320 Broadway, for flooring and steel ceilings in City Hospital, Blackwell's Island, $12,635; J. H. Goetschins, 533½ Hudson St., for addition to the general drug department at Bellevue Hospital, $14,980.

PITTSBURG, PA.—George Hogg is said to have been awarded the contract for erecting the new Liberty market house, at about $130,000. Jas. R. Mellon, Pres. Bd. Directors.

ANNAPOLIS, MD.—Theodore B. Roosevelt, Asst. Secy. Navy, has recommended that Congress make an appropriation for the erection of a new set of buildings on the ground of the Naval Academy at Annapolis.

WASHINGTON, D. C.—We are informed that it has been decided to start next spring on the new Y. M. C. A. building, to be erected on New York Ave., if funds are available, as the temporary building was destroyed by fire on Jan. 3. The building will be of brick and stone, 76 × 135 ft., and six stories high, with gymnasium, baths, bowling alleys, etc.; estimated cost $125,000. W. N. Multer, Gen. Secy., 1407 New York Ave., N. W.; Jas. G. Hill, Arch., Corcoran Building.——Plans have been prepared by the supervising architect for a fireproof hall of records, 200 × 500 ft., to cost about $5,000,000.——The district commissioners have asked Congress for $54,000 to complete the Western High School, $33,000 for completion of the structure, $15,000 for equipment and $6,000 for grading and paving.——Press reports state that the "Evening Star" Publishing Co. intend to erect a $300,000 building at 11th St. and Pennsylvania Ave. Pres., S. H. Kauffmann.

ATLANTA, GA.—We are informed that William Blasell & Co. have been awarded the contract for the erection of a warehouse on Marietta St., near Foundry St., by the Kiser Estate. Archs., Bruce & Morgan, Grant Bldg.

DAYTON, O.—The Dayton Union Ry. Co. has decided to erect a new station in this city, in accordance with an ordinance passed by the council on Dec. 24. Pres., M. E. Ingalls, Cincinnati, O.

CAIRO, ILL.—A fire in this city Jan. 1 destroyed the European Hotel and several adjacent buildings; fully insured.

CHICAGO, ILL.—Bids are asked by the business manager of the board of education, 1110 Schiller Bldg., 109 Randolph St., until Jan. 21, for erecting an addition to the Longwood branch of the Alice L. Barnard School; also for the plumbing, heating, etc., of the same. Arch., Normand S. Patton, 1117 Schiller Bldg.——The Chicago Commercial Exposition Co. is being organized in this city, with a proposed capital of $1,500,000, to erect a building or group of buildings to replace the burned Coliseum on the Lake Front Park site.——Plans have been prepared for an apartment building to be erected at Kedsie and Park Aves., for Corse & Jeffrey, 534 Unity Bldg., at a cost of $50,000. Arch., Chas. W. Nothnagel, Adams Express Bldg.

JANESVILLE, WIS.—Reports state that a new jail building for Rock county will soon be erected at this place; estimated cost, about $25,000. T. B. Bailey, of Beloit, is a member of the building committee.

LAWRENCE, KAN.—Bids are asked until Feb. 1 for erecting an auditorium building for the Haskell Institute at this place, for the U. S. Indian School Service. Supt., J. A. Swett.

ST. LOUIS, MO.—A fire in this city Jan. 8 destroyed the tobacco warehouse at 12th and Market Sts. owned by Christman Pepper. Estimated loss, $100,000.

LITTLE ROCK, ARK.—Bids are asked by the supervising architect, Washington, D. C., until Jan. 27, for making additions to the low temperature, hot water, heating and ventilating apparatus in the new extension of the U. S. court house and post office building in this city.

DENVER, COLO.—Bids are asked by the supervising architect, Washington, D. C., until Jan. 28, for the foundations, superstructure and roof covering of the U. S. Mint Building in this city.

PUEBLO, COLO.—The following bids were received by the supervising architect, Washington, D. C., Jan. 7, for a low-pressure steam heating and ventilating apparatus for the Post Office Building in this city:

| | Total. | Time. |
|---|---|---|
| Oby & Co., Canton, O. | $20,739 | 100 days. |
| Chafer & Becker, Cleveland, O. | 24,579 | 100 " |
| Chas. J. Kelley, Denver, Colo. | 21,333 | 130 " |
| Pittsburg (Pa.) Heat'g & Ventilat'g Co. | 16,548 | 100 " |
| Thomas & Smith, Chicago, Ill. | 17,729 | 5 mos. |
| Samuel I. Pope Co., Chicago, Ill. | 18,947 | 95 days. |
| Chas. B. Kruse Heat'g Co., Milwaukee. | 15,835 | 100 " |
| Bayley Heating Co., Milwaukee, Wis. | 17,748 | 100 " |
| Kelly & Lamb, Minneapolis, Minn. | 11,987 | 80 " |

PORTAGE LA PRAIRIE, MAN.—Bids are asked by the department of public works, until Jan. 21, for the installation of a heating apparatus in the public building at this place. Secy., E. F. E. Roy, Ottawa, Ont.

CHATHAM, ONT.—Bids are asked until Jan. 19 for erecting a house of refuge for the county of Kent. J. C. Fleming, County Clk.

SINGAPORE, STRAIT SETTLEMENTS.—Competitive plans are asked by the commitee of the Singapore Permanent Jubilee Memorial until April 30, for a town hall and theatre building, to be erected here at a cost not exceeding $300,000. Plans may also be sent to Walter Egerton, Secy. Com., Singapore, until May 31. Major F. J. Anderson, R. E., Royal Engineers' Office, South Camp, Aldershot, England.

## WATER-WORKS.

PEAK ISLAND, ME.—The Peak Island Water & Light Co. has been incorporated at Portland, for the purpose of acquiring and operating water-works and light plants; capital stock, $50,000, of which $60 is paid in. Pres., Richard K. Gatley, Portland, Me.; Treas., Charles C. Douglass, Portland. Local papers state that a stand-pipe and pumping station will be erected. The incorporators are also considering the question of organizing another company to supply Long Island.

WHITINSVILLE, MASS.—Press reports state that a new reservoir for an increased water supply will be built on Taylors Hill in the spring.

NEW HAVEN, CONN.——Local papers state that the New Haven Water Co. will construct a reservoir in Wallingford, about 12 miles from this city, for the storage of water from Pine River. Pres., Eli Whitney.

BUFFALO, N. Y.—A site has been selected for a new pumping station. With apparatus it will cost $500,000.

CHARLOTTE, N. Y.—The village trustees have appointed a committee to secure estimates for works, according to reports.

FULTON, N. Y.—Wm. R. Hill, Ch. Engr. and Supt. Water Dept., Syracuse, N. Y., has been engaged by the citizens' committee to make a general plan and estimate of cost of municipal works, and also to estimate the value of the plant of the Fulton Water-Works Co. The contract with the water company expires Feb. 1. F. G. Spencer, H. L. Paddock and C. H. David are on the committee.

MOUNT KISCO, N. Y.—Bids are asked for the purchase of water bonds and also for furnishing material for gravity and pumping works. Estimated cost, $25,000. Des. Engr., E. Delavan Smalley, Syracuse, N. Y.

JERSEY CITY, N. J.—Bids are asked by the street and water board until Feb. 23 for furnishing the city with a new water supply and also for a supply of filtered water. Bond, $100,000. Geo. T. Bouton, Clk.

VAILSBURG, N. J.—The council will probably take immediate action in regard to the proposed works and sewerage system. Estimated cost, $40,000. Mayor Maybaum and Alderman Reynolds may be addressed.

ASPINWALL, PA.—This place voted Dec. 21 in favor of issuing $25,000 in bonds for the purchase of the works of the Aspinwall Water Co. and the plant of the Aspinwall Electric Light & Power Co. It is proposed to extend both plants. W. R. Smith, Clk. Council.

JOHNSTOWN, PA.—Local papers state that the work of laying about four miles of pipe for the Johnstown Water Co. will soon be begun. The contract for furnishing 4,400 tons of 16 to 30-in. pipe for the extension was let sometime ago to the National Foundry & Pipe Works, Ltd., Scottdale, Pa. Plans are being prepared for a storage reservoir above the Mill Creek reservoir and also for a dam at the Stoney Creek intake line. Secy., A. H. Walters.

LEBANON, PA.—The board of water and lighting commissioners has requested George W. Hayes, Cy. Engr., to obtain estimates from water-supply engineers as to their charges in a lump sum for making a preliminary water supply survey from a point near High Bridge, on the Schuylkill and Susquehanna Branch of the Philadelphia & Reading R. R., to Lebanon, a distance of about 22 miles; also, to ascertain from chemists what they will charge for making complete water analyses.

MEDIA, PA.—The question of extending the works, erecting a stand-pipe, securing an 800,000-gallon pump, etc., to cost about $12,000, will be voted upon at the annual election, according to reports.

PHILADELPHIA, PA.—Bids are asked until Jan. 18 for furnishing cast-iron water pipe, special castings, lead, brick, fire clay, cement, etc. Thos. M. Thompson, Dir. Dept. Pub. Wks.

HYATTSVILLE, MD.—Maj. M. V. Tierney, Pres. Bd. Comrs., writes us that the citizens on Jan. 6 decided to petition the legislature for the right to issue $25,000 of 30-year 4% bonds for works. R. E. White, Dr. P. A. Wells, L. H. Campbell, Roger Bellis and F. H. Smith are on the committee.

NORFOLK, VA.—The council has adopted the commissioners' recommendation to secure a new supply from Little Creek. An appropriation of $250,000 has been made for the work. W. T. Brooke, Cy. Engr. H. C. Davis, E. B. Freeman, K. B. Elliott, W. A. S. Taylor, W. T. Barron and C. A. Woodward compose the commission.——Jas. Riddle, Supt., writes us that condemnation proceedings have been ordered to procure a portion of Little Creek.

PETERSBURG, VA.—G. B. Gill, Cy. Audr., writes us that nothing definite has been done in regard to new works or an increased supply, the matter being only under discussion. C. F. Collier, Mayor.

BRUNSWICK, GA.—Reports state that City Attorney Kay will submit a decision entitling the city to annul its 20-year contract with the Brunswick Light & Water Co. An effort has been made to force the city to purchase the plant for $225,000 when it is considered to be worth but $80,000. It is probable new works will be built.

MACON, GA.—J. N. Hazlehurst, Civil Engr., Atlanta, Ga., is reported to have been awarded the contract for building a new pumping station on the Ocmulgee River, about three miles from here, for the Macon Gaslight & Water Co. Other improvements to the works, to cost about $100,000, are projected.

UNADILLA, GA.—This place voted last week to issue $4,000 in bonds for improving and extending the works. Population, 700.

MONTGOMERY, ALA.—A committee of five has been appointed by the president of the council to confer with W. B. Rice in regard to the amount to be paid for the water-works of which he is the chief owner. The price asked is about $475,000. Mayor J. H. Clisby, Aldermen Joseph, Wiley, Roman, Fleming and Meyer compose the committee.

FRANKLIN, KY.—Bids are asked until Jan. 28 for the purchase of $21,000 of 5% water bonds. The contracts for constructing the works were let in December, as noted in our issue of Dec. 23. M. S. Harris, Mayor.

CLARINGTON, O.—An election will probably soon be held to vote on the question of issuing bonds for works, estimates for which are now being prepared.

CLEVELAND, O.—Bids are asked until Feb. 2 for furnishing and delivering such cast-iron water pipe and special castings as may be required during the year. About 10,000 tons of pipe will be bought. Bond, $5,000. Geo. A. Warden, Dir. Pub. Wks.

CONNEAUT, O.—It is reported that the Conneaut Water-Works & Supply Co. will make improvements to its works. Population, 4,000. Pres., H. Davis Northrup, Fort Edward, N. Y.

ELMWOOD PLACE, O.—The council has sold $15,000 of bonds to Lamprecht Bros. for the pipe for the proposed water supply. E. F. Layman will be employed at once to prepare plans and specifications for the works. Bids will be asked separately for furnishing the pipe and for the excavation. J. H. Bart, Mayor.

GERMANTOWN, O.—J. C. Schaeffer, Clk., writes us that the council will present the question of works to the voters in a short time. Wm. G. Mohler, Consult. Engr., Springfield, O., has been employed to superintend the work.

OAKLAND CITY, IND.—L. M. Shoemaker & Co., Bloomington, Ind., are reported to have been granted a franchise for works.

SCHOOLCRAFT, MICH.—An election will soon be held to vote on the question of issuing bonds for works and other city improvements. Population, 1,100. G. M. Hudson, Mayor.

DE KALB, ILL.—This city is sinking an artesian well and wants to secure prices and descriptions of a pump, as stated in our advertising columns. Engr., L. B. Merriam, De Kalb; Chn. Com., S. M. Stevens; Cy. Clk., E. A. Porter.

GRANITE, ILL.—The Venice, Madison & Granite City Water Co. has submitted a bid to furnish this place with water from 1898 to 1925 at $80 a hydrant a year. The company has been supplying this place with water for several years. F. G. Niederinghaus, Granite, may be addressed.

KANKAKEE, ILL.—Press reports state that a bill filed in the Circuit Court Jan. 5 by the Farmers' Loan & Trust Co. of New York asks for the foreclosure of a mortgage of $50,000 and the appointment of a receiver for the Kankakee Water-Works Co. The supply will not be disturbed. Supt., J. B. Reed.

SPRINGFIELD, ILL.—Local papers state that bids will be asked at once for furnishing and placing a new duplex pumping engine of 8,000,000 gallons capacity. Plans and

specifications are now being prepared. Supt., W. H. Southwick. Mayor Wheeler and City Engineer F. H. Hamilton may be addressed.

BEAVER DAM, WIS.—Press reports state that the Beaver Dam Water Co. has been incorporated by William B. Hord, Charles F. Street and H. J. Bickford, all of New York. Capital stock, $125,000. The three incorporators are the creditors who bought the Beaver Dam water-works at the foreclosure sale held by United States Marshal Pratt, of the Eastern district, Oct. 1, 1897.

ELMA, IA.—The election to vote on the question of works, noted in our issue of Dec. 30, will be held Mar. 28. Population, 1,200. D. J. O'Donnell, Cy. Clk.

ST. ANSGAR, IA.—The question of works is being considered, according to reports.

MARSHALL, MINN.—Press reports state that the steel water tower supporting a tank of 60,000 gallons capacity collapsed about Dec. 28. Supt., J. G. McGee.

SAUK CENTRE, MINN.—It is reported that arrangements will soon be made for the new works and electric light plant. Population, 2,000. Mayor Townsend. Councilmen Ransom Buck and Geo. Ingraham may be addressed.

NEODESHA, KAN.—Another election will be held Jan. 17 to vote on the question of issuing $15,000 in bonds for works. J. M. Walker, Cy. Engr. of Coffeyville, Kan., may be addressed.

RAPID CITY, S. DAK.—Bids are asked until Feb. 5 for constructing works and a sewerage system, etc., at the Indion reservation school. R. P. Collins, Supt. School, Rapid City, or 1602 State St., Chicago, Ill.

KEYTESVILLE, MO.—An election was held Jan. 11 to vote on the question of issuing $5,000 in bonds for extending the works and electric light plant, according to reports.

SEDALIA, MO.—John B. Rickman, Chn. Cy. Com., writes us that the Sedalia Water & Light Co. will have to do something to increase the water supply. Population, 20,000. Pres., J. B. Quigley.

BOULDER, COLO.—The Dumont Water & Power Co. has been incorporated with a capital stock of $90,000 by Wm. Babcock, Amanda E. Campbell and Geo. J. Ritter.

EVANS, COLO.—The question of issuing bonds for a supply will probably soon be voted upon.

FLORENCE, COLO.—M. E. Lewis, Mayor, writes us that the people voted on Jan. 4 against new works, to cost about $75,000.

COLTON, CAL.—It is stated that this place voted Dec. 27 against issuing $20,000 in bonds for extending the works, described in our issue of Nov. 18. D. Johnston, Clk.

ELSINORE, CAL.—Bids were asked until Jan. 10 for constructing works to cost about $20,000. Bond, $10,000. Geo. E. Bennett, Pres. Bd. Trustees; L. B. Peck, Clk.

BARRIE, ONT.—The recent election in this city resulted in the election of candidates favorable to the municipal ownership of the works and the electric light plant. A board of arbitration is now securing information in regard to the matter. Dr. Wells, Mayor Reeve, W. C. McLean and Councilmen R. E. Bennett, R. Powell and E. B. Reid may be addressed.

MOUNT FOREST, ONT.—Bids are asked until Jan. 17 for constructing works. Population, 2,500. Consult. Engr., John Galt, Canada Life Bldg., Toronto, Ont.; Chn. Com., J. P. Noonan.

FORT WILLIAM, ONT.—T. Edward Oakley, Secy. Bd. Water Comrs., writes us that up to Jan. 5 no engineer for the proposed works had been engaged. No work will be done before May, when bids will be asked. Estimated cost, $35,000. Population, 3,500.

PORT COLBORNE, ONT.—R. Greenwood Reeve, writes us that this place voted by a large majority Jan. 3 in favor of the by-law for the proposed works described in our issue of Nov. 25. It will be about a month before bids will be asked. Estimated cost, $16,000. Des. Engr., J. F. Witmer, Ellicott Square, Buffalo, N. Y.

SARNIA, ONT.—Wm. Logue, formerly Chn. Water and Light Com., writes us that the people voted in favor of extending the works at a cost of $20,000. A new boiler and pump will be purchased. The new supply will be secured from the St. Clair River. Population, 7,000.

## IRRIGATION.

CUERO, TEX.—The Buchel Power & Irrigation Co. wants irrigation machinery for its proposed system. Otto Buchel, Pres.

BAKERSFIELD, CAL.—Charles Offer will erect a reservoir 340 × 115 × 8 ft., having capacity of 3,000,000 gallons, the water to be used for irrigating purposes. Another reservoir will be commenced in a few days. Water is to be obtained from wells already bored, the pumps to be run by electricity.

GONZALES, CAL.—Reports state that Alfred Gonzales and M. E. Ganzales will irrigate this portion of the Salinas Valley by tapping the Salinas River and conveying the water to a reservoir; estimated cost, $10,000.

SAUSALITO, CAL.—It is reported that Messrs. Mackay and Flood, of the Nevada Bank, have contracted to construct levees on the marsh southeast of here to reclaim the land for agricultural purposes.

ESCONDIDO, CAL.—According to reports the Yuma Valley Union Land & Water Co. is considering the question of constructing a gravitation canal to irrigate a part of the Colorado Valley.

SAN BERNARDINO, CAL.—Reports state that a filing of 10,000 ins. of the flow of the Mojave River has been made by R. Day, T. Wiesendanger and R. H. Greer, to establish a plant for irrigation, mining and mechanical purposes by a dam, ditch and flumes.

NEW COMPANIES.—Jefferson County Irrigation & Drainage Co., Beaumont, Tex.; $200,000; to irrigate Jefferson county for rice culture; W. A. Ward, Seth Turner, U. S. Davidson, Thos. H. Laugham, Wm. Weiss, John B. Goodhue.

Overmont Water & Power Co., Boulder, Colo.; $90,000; to build a ditch in Pueblo county to operate mills by water power; Wm. Babcock, Mary C. Babcock, Amanda E. Campbell, James B. Maybridge.

## SEWERAGE.

NASHUA, N. H.—Cy. Engr. Dean has been instructed to prepare plans for trunk sewers in Crown Hill, Lake St. and the harbor districts.

BUFFALO, N. Y.—Bids are asked until Jan. 19 for constructing 39 to 30-in. brick and 20 to 12-in. pipe sewers in several streets. R. G. Parsons, Secy. Dept. Pub. Wks.

LITTLE FALLS, N. Y.—S. E. Babcock, Cy. Engr., informs us that the following bids were received for the construction of a one-acre sand filter bed with Babcock conduits and stone drain. Thos. Kearney, Little Falls, $14,900 (accepted); Hullman Bros., Trenton, N. Y., $15,450.

ROCHESTER, N. Y.—Bids are asked until Jan. 20 for constructing a sewer in Ericsson St. T. J. Neville, Clk. Executive Bd.

NORTH TARRYTOWN, N. Y.—Reports state that the board of trustees has refused to grant the commissioners' request for an election on Jan. 19 to vote on the question of appropriating $18,000 to complete the system. David Silver, Clk. Bd. Trustees.

BAYONNE, N. J.—The council has rejected the bids received Jan. 5 for constructing a sewer in Ave. A, at a cost of about $30,000. Jas. J. Cogan, Bayonne, submitted the lowest bid. Emmett Smith, Cy. Surv.

ELIZABETH, N. J.—It is proposed to construct a sewer in Westminster Ave.——The council is considering ordinances for mains and sewers in a number of streets.

MEDIA, PA.—The question of constructing a system and extending the water-works, at a cost of $45,000, will be voted upon at the election in February.

MILLVALE, PA.—An election will probably be held Feb. 15 to vote on the question of issuing $25,000 in bonds for a sewer in Girty's Run. Daniel Giles, Pres. Council, and Burgess W. A. Long may be addressed.

NEW BRIGHTON, PA.—E. H. Thomas, Burgess, writes us that the city has taken no action in regard to a system, other than surveys. Estimated cost, $60,000.

HYATTSVILLE, MD.—At a meeting of the citizens, held Jan. 6, it was decided to put in a part of the system. M. V. Tierney, Dr. Chas. A. Wells, L. H. Campbell, F. H. Smith, Roger Bellis, Improvement Comrs.

WASHINGTON, D. C.—A bill has been prepared by the district commissioners and submitted to the secretary of the treasury proposing the issuance by the district of $3,500,000 in bonds for a complete system.

MOUNT VERNON, O.—We are informed that J. W. Hysit, Zanesville, O., submitted the lowest bid Jan. 8 for constructing sewers, at $6,000.

SPRINGFIELD, O.—The board of public affairs is considering the question of constructing 24 to 18-in. pipe sewers in several streets.

TOLEDO, O.—Bids are asked until Jan. 24 for constructing 24-in. cylindrical brick sewers in several streets, and until Jan. 31 for a 5-ft. sewer in Ash St. L. P. Harris, Cy. Clk.

MOUNT FOREST, ILL.—Bids are asked until Jan. 17 for constructing 1,500 ft. of 8-in. pipe sewers, 7 manholes, one flush-tank, etc.; average cut, 13 3-5 and 11 2-5 ft. Engrs., Alvord & Shields, 1140 The Rookery, Chicago; E. T. Gorton, Mayor.

RAPID CITY, S. DAK.—Bids are asked until Feb. 5 for constructing a system and water-works at the Indian school.. R. P. Collins, Supt. Indian School, Rapid City, and 1602 State St., Chicago, Ill.

HOUSTON, TEX.—Bids are asked until Jan. 17 for constructing sewers in certain streets; bond, $1,000. H. B. Rice, Mayor.

EVERETT, WASH.—J. A. Dalcmer, Mayor, writes us that this place has voted against issuing $30,000 in bonds for sewers.

SPOKANE, WASH.—The board of public works has recommended the construction of sewers in a number of streets at a cost of $17,584.

TACOMA, WASH.—Commissioner of Public Works Dougherty is reported as preparing plans improving and extending the system.

SANTA MONICA, CAL.—It is reported that the city trustees will at once ask for bids for constructing sewers to cost about $16,000.

SANTA ANA, CAL.—An election will be held Feb. 5 to vote on the question of issuing $65,000 in bonds for a system. Village Trustees W. H. Spurgeon and J. R. Congdon may be addressed.

GALT, ONT.—This city voted Jan. 3 against issuing bonds for a partial system, a new fire house, etc.

MEXICO, MEX.—L. E. Miller, Cape May, N. J., is reported to have been awarded the contract by the Mexican government for building sewers in this city.

## GARBAGE DISPOSAL—STREET CLEANING

CAMDEN, N. J.—Bids are asked until Jan. 26 for the removal of ashes from the various school buildings for one year. Wm. N. Evans, Chn. Com.

ELIZABETH, N. J.—Jas. J. Manning, Cy. Clk., informs us that the following bids were received Jan. 3 for removing the garbage, etc., for three years; all local bidders: Henry S. Clark, $23,500; Joseph Brown, $22,640; Mathew Wade, $21,625; James Clark, $21,400; Patrick Faughran, $20,658; Jere O'Connor, $20,000; James Carroll, $19,400; Peter Hauck, $18,220; Jacob Christman, $18,000; Theodore Glaser, $18,000, awarded contract.

NEWARK, N. J.—Local papers state that the board of health is considering the question of a garbage disposal plant, as recently recommended by the health officer.

WHEELING, W. VA.—The council has granted B. F. Howland, Philadelphia, permission to erect a garbage disposal plant on the river front, near 27th and 28th Sts. Bond, $10,000. Mayor Butts may be addressed.

LIMA, O.—The board of health has directed the clerk to secure prices for two garbage collection wagons. The contract for collecting the garbage will soon be let.

TOLEDO, O.—The ways and means committee has decided to ask for bids for collecting and disposing of the garbage, using either the reduction or the crematory process. After the bids have been received a trip will be taken to a number of cities to investigate the various methods. Councilmen Engelhardt, Reeves and Meissner may be addressed.

SAN DIEGO, CAL.—The San Diego Garbage Crematory Co. has been incorporated with a capital stock of $10,000 by John Rosner, M. D. Goodbody and J. S. Bachman. The company is said to have submitted a proposition to the council.

OVER DARWEN, ENGLAND.—Bids are asked until Jan. 17 for furnishing Darwen with a garbage destruction plant. R. W. Smith-Saville, Borough Engr.; Chas. Costeker, Town Clk., Darwen.

WOLVERHAMPTON, ENGLAND.—Plans and bids are asked until Feb. 7 for furnishing motor-vans for street scavengering and the conveyance of road materials. J. W. Bradley, Borough Surv., Town Hall.

## STREETS AND ROADS.

BOSTON, MASS.—Bids are asked until Jan. 14 for about 3,260 lin. ft. of telford macadam roadways, planting spaces, and crushed stone sidewalks, in the section of Columbia Road, between Stanwood St., and about 220 ft. beyond Glendale St., ward 20. Benj. W. Wells, Supt. Sts.

NORTH STONINGTON, R. I.—Bids are asked until Feb. 7 for grading, etc., portions of three roads. George A. Pendleton, First Selectman.

MIDDLETOWN, CONN.—The board of aldermen have been asked for an appropriation of $20,000 for the street department for this year, which proposes to macadamize in 14 streets at an estimated cost of $13,460.

NORFOLK, CONN.—Myron W. Clark, Cy. Clk., informs us that the following submitted bids [illegible] for grading the Greenwoods Road: Town of Norfolk, section No. 20; O. M. Snow & Son, Norfolk, section No. 15; Jos. Carey, Winsted, Conn., to state. It was $826 appropriated for good roads, and half by the town. The contract was that would build the most road for that was bid by the town.

ELMIRA, N. Y.—Reports state that [illegible] submitted plans for macadamizing [illegible] Cedar and Pearl Sts., to cost $4,846. Alderman, may be addressed.

UTICA, N. Y.—The council has passed [illegible] the paving of portions of 11 streets. [illegible] presented for paving in Aiken St., Sunset A[illegible] St. Chapman L. Johnson, Cy. Engr.

TRENTON, N. J.—A petition has been [illegible] macadam road from Crosswick's Creek [illegible] Horse Road, and from the creek to [illegible] are also being taken for macadamizing [illegible] and reports state that if these plans are [illegible] will be a macadam road from this city.

EASTON, PA.—Bids are asked until Jan. [illegible] street crossings and cobblestone paving for [illegible] March 31, 1899. H. K. Fehr, Cy. Engr.

READING, PA.—Reports state that the [illegible] the Pennsylvania Asphalt Co. for paving [illegible] and South 5th St., amounting to $17,6[illegible] by the board of public works.——The board [illegible] the paving of Cherry St. with vitrified br[illegible] St. to 11th St. Samuel S. Hoff, Cy. Engr.

ELKRIDGE, MD.—A committee consisting [illegible] C. Norris, Chn., Harman Wheland, Albert [illegible] R. Eareckson, M. D., W. H. Morris, Leonard [illegible] Arthur Williams, M. D., has been appointed [illegible] a delegate from each of the six districts [illegible] of considering the question of better roads [illegible] meeting of the good roads association, Jan. 2[illegible]

WASHINGTON, D. C.—A bill has been presented to Congress providing for a change in the law [illegible] ing to the extension of streets and providing [illegible] ance of $4,000,000 in District bonds for the [illegible] and purchase of land for new streets.

NEW ORLEANS, LA.—Bids are asked until [illegible] repairing Frenchman St., from Burgundy to [illegible] with shells. A. C. Bell, Cy. Engr.; P. A[illegible] Comptroller.

TOLEDO, O.—Reports state that Wm. McMahon submitted the lowest bid for paving Nevada St. with brick for a distance of 4,440 ft.; estimated cost, $21,000.

COLLEGE HILL, O.—Bids are asked until Jan. 31 for the purchase of $1,811 in 6% sidewalk bonds. F. R. Strong, Cy. Clk.; C. F. Layman, Cy. Engr.

LIMA, O.—C. E. Lynch, Cy. Clk., informs us that the preliminary resolutions have been adopted for paving Main St., a distance of about 1¼ miles, with brick at an estimated cost of $50,000. Bids will not be asked for in several weeks.

CINCINNATI, O.—Bids are asked by the board of administration until Jan. 26 for repairing and maintaining for five years Eighth St., from Broadway to Vine St., except the intersections of Sycamore, Main and Walnut Sts.; also for grading, asphalt paving, etc., Index Ave., from Colerain Ave. to Spring Grove Ave. Aug. Hermann, Pres.; A. P. Butterfield, Clk.

MUNCIE, IND.—Bids are asked until Feb. 7 for constructing cement sidewalks. F. A. Elroy, Cy. Clk.

PONTIAC, MICH.—Reports state that the council is considering the proposition of repaving Main St. with a cement or block pavement.

OMAHA, NEB.—Bids are asked by the board of public works until Jan. 14 for constructing sidewalks for the year 1898, with either stone, brick or tiling.

HOUSTON, TEX.—We are informed that the definite action has yet been taken toward dispensing with the cobble stones and gravel pavement on Main St., between Commerce and Capitol Aves., but a replacement with either brick or asphalt is looked for in the near future. L. A. Gueringer, Cy. Engr.

OAKLAND, CAL.—It is reported that grading, macadamizing etc., in Fourth Ave., for two blocks, at an estimated cost of $4,000, has been recommended.

## MANUFACTURING PLANTS.

BUFFALO, N. Y.—A fire in this city, Jan. 2, destroyed the sash and door factory of the C. J. Hamilton Co., on Erie St., causing a loss of about $100,000.

GREENE, N. Y.—The Lyon Iron Works were burned Jan. 4, entirely destroying the machine shop and the molding rooms; estimated loss, $17,000. Pres., A. Lyon, of Greene.

UTICA, N. Y.—The directors of the Savage Arms Co. have decided to erect the proposed factory buildings on a site near the West Shore R. R., between Genesee and Oneida Sts. Plans for the new buildings have not been fully prepared.

MECHANICVILLE, N. Y.—A new brick company has been organized which proposes to build and operate a plant south of the Best Brick Co.'s plant. No. L.

PATERSON, N. J.—Press reports state that a new silk factory will soon be established in this city by a company represented by O. B. White, of Paterson, and that a site has already been secured.

CORAOPOLIS, PA.—A number of Cleveland capitalists have bought out the Timmons refinery at this place and are constructing four large buildings of brick and iron, covering two acres of ground, for the manufacture of vaseline. L. O. Sherman, of the Standard Oil Co. and C. G. Barkwell, Secy. Columbia Savings & Loan Co., Cleveland, O., are at the head of the concern.

PHILADELPHIA, PA.—J. T. Cowling, Mgr., Powelton, Pa., is reported as saying that this company will make additions to its boiler and engine rooms and install a new 1,000 HP. engine.

PITTSBURG, PA.—The Epping-Carpenter Co. will erect a new factory building for the manufacture of pumps, etc., on Butler St.; the machine shop will be 100 × 200 ft. Samuel Discher, M. E., Hamilton Bldg., Pittsburg, is preparing the plans.

REYNOLDTON, PA.—It is announced that the subscriptions have nearly been raised for the new silk mill which is to be erected at this place at a cost of $100,000.

NEWPORT NEWS, VA.—Mayor Post and others are contemplating the erection of a silk mill in this city, to cost about $75,000.

WINCHESTER, VA.—The woolen mills of Williams' Bros., about 1½ miles southeast of Winchester, were destroyed by fire Jan. 4, causing an estimated loss of $25,000; insurance, $2,000.

BESSEMER CITY, N. C.—It is reported that the Bessemer City Cotton Mills will erect new buildings and necessary equipment in the spring. J. A. Smith, Pres., Bessemer City.

WALHALLA, S. C.—**The Walhalla Mill, which now operates 3,000 spindles, will soon be enlarged so as to use 7,000 more.** M. G. Stone, Gen. Mgr. and Treas.

ROSSVILLE, GA.—Reports state that contracts for the construction of the Richmond Hosiery Mill have been awarded as follows: General work, J. E. White; brick work, R. L. Wescott; excavation, Geo. L. Gillespie.

ATLANTA, GA.—Reports state that the Hawson Down Draught Furnace Co. will establish a plant in this city at a cost of $100,000 and are to employ 100 skilled mechanics.

AUGUSTA, GA.—Press reports state that the owners of the Globe Cotton Mills will add about 1,000 spindles to the 2,000 now in use.

BIRMINGHAM, ALA.—It is stated that James T. Burns, Pittsburg, Pa., has submitted a proposition to the Commercial Club for the construction of a steel furnace and plant for manufacturing steel for edge tools, etc.; estimated cost, about $850,000. It will be built providing that the Birmingham investors subscribe for $200,000 worth of stock and donate 100 acres of land.

EAST LIVERPOOL, O.—The Wellsville Porcelain Co., capital stock, $100,000, has been incorporated by a Pittsburg syndicate to erect a six kiln pottery plant in this place.

HAMILTON, O.—Reports state that the Hooven, Owens & Reutschler Co. has awarded contracts for the construction of its $90,000 plant to the Columbus Bridge Co., Columbus, O., for the steel work, and to J. F. Bender Bros. Co. for the remainder of the building.

NORWALK, O.—President Johnson, of the Middleboro Foundry & Machine Works, is quoted as saying that the foundry which was recently destroyed by fire will be replaced as soon as possible by a steel building.

SPRINGFIELD, O.—Reports state that a Philadelphia syndicate which has a capital stock of $50,000,000, will probably install a plant here for the manufacture of cellulose machinery, giving employment to 2,000 men.

EVANSVILLE, IND.—Henry Giessel & Co., Chicago, Ill., manufacturers of the Buffington acetylene gas machine, is considering the question of establishing a branch factory here.

FORT WAYNE, IND.—The Browser Oil Tank Works recently suffered a loss of $25,000 by fire.

INDIANAPOLIS, IND.—The Jenny electric plant which was destroyed by fire will be rebuilt under a new company with a capital stock of $100,000.

SPRINGFIELD, ILL.—Frank Godley's shoddy mill, recently burned, is being rebuilt at a cost of $80,000, according to reports.

DES MOINES, IA.—Reports state that the Duplex Typewriter Co. has about completed plans and is now negotiating for the land for its new factory.

ELDORA, IA.—The Eldora Maple Syrup & Sugar Co. intends to construct a factory, 50 × 120 ft., next spring, with a capacity of 1,000 gallons a day.

TWO HARBORS, MINN.—Reports state that P. W. Agnew, Chippewa Falls, Wis., will construct a saw mill having a capacity of 3,000,000 ft., B. M., of lumber a season.

ST. LOUIS, MO.—James Stewart & Co, of St. Louis, and Buffalo, have been awarded the contract for erecting a new factory building for the Hamilton-Brown Shoe Co., of this city. The building will be of brick and of fireproof construction, 104 × 138 ft., and will cost about $250,000 when completed, exclusive of machinery.

## GAS PLANTS.

COLLEGE POINT (L. I.), N. Y.—Reports state that the Welsbach Street Lighting Co. has been awarded a contract to furnish and maintain 200 lights, for a period of five years.

PORT RICHMOND (S. I.), N. Y.—Press reports state that John J. Manning, H. Butler and others of the American Illuminating Co., have applied to the council for a franchise to lay gas conduits and also to furnish gas at $1 a 1,000 cu. ft.

NEW YORK, N. Y.—The Equitable Gas Light Co. and the New York & East River Gas Co. have consolidated with a capital stock of $13,000,000.

WILKES BARRE, PA.—The Consumers Gas Co., according to reports, will hold a meeting Feb. 28 to consider the question of increasing its capital stock from $60,000 to $120,000.

LEBANON, PA.—Reports state that the proposition of a Philadelphia syndicate to purchase the Lebanon Gas Co. has been abandoned.

PHILADELPHIA, PA.—Press reports state that the United Gas Improvement Co. will improve its works at Point Breeze Station by installing a new coal gas plant and water gas jets.

PAINESVILLE, O.—The council is reported as considering a resolution to advertise for bids for the erection and equipment of a city gas plant.

ZANESVILLE, O.—Press reports state that a franchise has been granted to the Great Southern Oil & Gas Co., Zanesville, for constructing a natural gas plant.

SIOUX FALLS, S. DAK.—Reports state that Jay B. Miller and A. B. Melville, Chicago, have applied for a franchise to establish gas works in this city to cost about $100,000. C. M. Harrison, the local agent, may be addressed.

NEODESHA, KAN.—An election will be held Jan. 17 to vote on the question of issuing $15,000 in bonds for a natural gas plant, according to reports.

NEW COMPANIES.—Boston Gas Co., Boston, Pa.; $1,000; Thos. L. Mattson, Treas., 1412 North 15th St.; Thos. D. Finletter, Peter H. Evans, Philadelphia.

Duquesne Borough Gas Co., Duquesne, Pa.; $1,000; to manufacture and supply gas; Thos. L. Mattson, Treas., 1412 North 15th St.; Thos. D. Finletter, P. H. Evans, Philadelphia.

Versailles Gas Co., Versailles, Pa.; $1,000; Thos. L. Mattson, Treas.

Christy Park Gas Co., Christy Park, Pa.; $1,000; Thos. L. Mattson, Treas., 1412 North 15th St., Thos. D. Finletter, P. H. Evans, Philadelphia.

Crawford County Gas Co., Girard and Pittsburg, Pa.; $5,000; W. C. McMillan, J. T. Leonard, F. W. Sturck, R. H. McKay, J. E. Raymond, Arthur Fuller, Girard, Pa.; John R. Lundburg, John A. Nuttman, James B. Smith, Robt. Robyn, Pittsburg.

Massillon Oil Co., Massillon, O.; $10,000.

Missouri Acetylene Co., Kansas City, Mo.; $750,000; R. Shall, ex-Gov. Wm. J. Stone, W. O. Cox.

Middletown Gas & Electric Light Co., Middletown, O.; $50,000; Charles E. Denny, W. F. Simpson, W. O. Barnes, T. E. Reed, J. J. Gallagher.

## MISCELLANEOUS CONTRACTS.

CULVERT.—St. Cloud, Minn.—The council proposes to build a cement culvert 253 ft. long, on N. 6th St.; estimated cost, $1,800.

HOSE WAGONS.—Trenton, N. J.—Bids are asked by the fire department until Jan. 19 for furnishing one or more hose wagons. Louis Diehl, Chn. Com.

EXTENDING PIER.—Margaree, N. S.—Bids are asked until Feb. 21 for extending the pier at Margaree, N. S. J. F. E. Roy, Secy. Dept. Pub. Wks., Ottawa, Ont.

RIVER WORK.—Sioux City, Ia.—Capt. J. C. Sanford, U. S. Engr., has recommended the appropriation of about $1,202,000 for the improvement of the upper Missouri River.

FIRE ALARM SYSTEM.—Mount Kisco, N. Y.—Bids are wanted for furnishing and installing a small fire alarm system, including signal boxes. E. D. Smalley, Engr., Syracuse, N. Y.

STEEL WALK.—Atlantic City, N. J.—Councilman Kelly has introduced an ordinance for the construction of a steel walk 20 ft. in width from Texas Ave. to Albany Ave., Chelsea district.

TUNNEL.—Cripple Creek, Colo.—It is reported that a London syndicate will complete the Ophelia tunnel, which will be about 8,000 ft. long. Estimated cost, $40,000. David H. Moffat and Wm. Bush are interested.

STEAMER REPAIRS.—Biloxi, Miss.—Bids are asked by the marine hospital service until Jan. 15 for repairing the quarantine steamer "Welch" and the barge "Zamora." A. C. Smith, Surgeon, Gulf Quarantine, via Biloxi.

DOORWAY.—St. Louis, Mo.—Bids are asked until Jan. 25 for furnishing the material and for constructing a freight car doorway at pumping station No. 1. Robt. E. McMath, Pres. Bd. Administration; E. S. Foster, Secy.

LEVEE WORK.—Alexandria, La.—Bids are asked by the board of commissioners of the Red River district until Jan. 19 for constructing 10-Mile Stretch levee, containing 220,000 cu. yds. J. G. White, Pres., Alexandria.

IMPROVING HARBOR.—Patchogue (L. I.), N. Y.—Reports state that the village trustees have purchased all the land under water in Brookhaven at $75 an acre, and are to construct docks to make this place a commercial port for eastern Long Island.

HARBOR IMPROVEMENT.—Antwerp, Belgium.—Reports state that the communal council has rejected the government project to spend about $20,000,000 in improving the harbor by changing the course of the river and constructing docks and quays.

DREDGING.—Milwaukee, Wis.—The Merchants' & Manufacturers' Association of Milwaukee has presented a petition to Congress for an appropriation of about $100,000 for dredging the Milwaukee and Menominee Rivers. John C. Spencer, Pres.; H. B. Wilkins, Secy.

TRAMWAYS, CARS, ETC.—Chicago, Ill.—Bids are asked until Jan. 13 for furnishing tramways, trolleys, shackles, cars, etc., for the basement of the Chicago Public Library building. Archs., Shepley, Butan & Coolidge, Old Colony Bldg., Chicago, and Boston, Mass. W. B. Wickersham, Secy.

CULVERT.—New Rochelle, N. Y.—The contract for the construction of the Burling Brook culvert along Ave. D. and through private lands, has been awarded to Peter Sweeney, of Danbury, Conn., at $9,990. The culvert will be 910 ft. long, 6 × 6 ft. 2 ins. inside and will be built of stone and brick masonry. J. K. Wilkes, Ch. Engr. Sewer Comrs.

CANAL.—Washington, D. C.—Senator Hasbrough has introduced a bill incorporating Henry G. Burleigh, Smith M. Weed and others as the Maritime Canal Co. of North America: capital $1,000,000; to construct a canal between the Great Lakes and the Atlantic, with a depth of 20 ft. and not exceeding ten locks, which will admit vessels 550 ft. long and 65 ft. wide.

RIVER WORK.—Chester, Pa.—Maj. C. W. Raymond, U. S. Engr., Philadelphia, has completed plans and estimates for Congress for work to be done in the Delaware River, in order to secure a depth of 30 ft. in the channel mostly between Chester and Wilmington, which will require about 32,000,000 cu. yds. of dredging and the removal of 60,000 cu. yds. of rock; estimated cost, $5,900,000.

HARBOR WORK.—Recife, Pernambuco, Brazil.—Bids are asked by the Brazilian minister, Washington, D. C., or the various consuls, until Feb. 28 for the construction of a breakwater on the submerged reefs of the harbor, increasing the height of the reefs, constructing definite quays, where vessels of large draft may be docked, dredging the entire port, placing buoys and piles for mooring vessels, constructing warehouses adequate for receiving, storing and preserving merchandise, which warehouses shall at the same time have the advantages and privileges conceded to the customs warehouses, building railways along the quays, connecting them with the warehouses, railways, and tramways already existing, erecting a complete set of hydraulic or electric cranes, and constructing docks or ways designed for the examination and repair of vessels. Des. Engr., Alfredo Lisboa.

## CONTRACT PRICES.

SEWER BRICK.—Louisville, Ky.—Bannon & Co. have been awarded the contract for furnishing sewer brick as follows: No. 1, for new sewers, being $11.00 a 1,000; for repairs, $11.50. No. 2, $9.00 a 1,000. They have also been awarded the contract for furnishing sewer pipe to the city at 7, 11, 16, 20, 31, 45, 55, 65 and 75 cts., with double strength pipe at $1.00, $1.45, $1.75 and $2.50, according to the quality desired.

BRIDGE AND APPROACHES.—New York, N. Y.—The following bids were received by the department of parks, Dec. 27, for constructing a bridge with its approaches, with a draw span and crib fender, between Pelham Bay Park and City Island, in the 24th Ward:

Bids Received at New York, N. Y., Dec. 27, for the Construction a Bridge with Its Approaches.

| Quantities. | | M. J. Dady, Brooklyn, N. Y. | Stephens & O'Rourke, 44 B'way. (accepted.) | Arthur McMullen, 26 Cortlandt St. | T. H. Riddle & Co., 115 Broadway | O'Brien, Sheehan & McHale, 278 Broadway. | J. C. Rodgers, 26 Cortlandt St. |
|---|---|---|---|---|---|---|---|
| Dredging | 2,000 cu. yds. | $1.00 | $1.00 | $6.00 | $0.72 | $5.50 | $2.00 |
| Drill'g hles & fur 3-in iron or stl rds 4½ ft. | 40 each... | 1.00 | 5.00 | 10.00 | 8.40 | 15.00 | 10.00 |
| No. 1 concrete foundation (Plan A)..... | 1,500 cu. yds. | 8.00 | 11.00 | 10.00 | 8.40 | 16.00 | 12.00 |
| Limestone ashlar fndatn masy (Plan A).. | 1,075 " " | 15.00 | 11.00 | 9.00 | 17.34 | 18.00 | 8.00 |
| Limestone ashlar pier (Plan A) ..... | 2,540 " " | 14.00 | 11.00 | 10.50 | 13.10 | 11.00 | 12.00 |
| Granite coping (Plan A) ..... | 3,350 cu. ft... | 1.25 | 1.40 | 1.25 | 1.80 | 1.50 | 1.50 |
| No. 1 concrete in fndatns of piers (Plan B) | 1,320 cu. yds. | 8.00 | 13.00 | 11.00 | 8.40 | 17.00 | 12.00 |
| Limestone ashlar fndatn, masry (Plan B) | 800 " " | 16.00 | 13.00 | 10.50 | 19.20 | 20.00 | 8.00 |
| Limestone ashlar, pier masonry (Plan B). | 2,110 " " | 12.00 | 13.00 | 10.50 | 13.20 | 12.00 | 12.00 |
| Granite coping (Plan B)..... | 2,350 cu. ft... | 1.25 | 1.40 | 1.25 | 1.80 | 1.00 | 1.50 |
| Granite pedestal blocks ..... | 81 " " | 1.50 | 1.40 | 1.50 | 2.00 | 1.85 | 3.00 |
| Crib fender ..... | 168,000 " " | .07 | .04 | .05½ | .06 | .05 | .06 |
| Timber ..... | 92 M. ft... | 28.00 | 40.00 | 33.00 | 30.00 | 40.00 | 40.00 |
| Timber work ..... | 80 " " | 40.00 | 28.00 | 30.00 | 28.00 | 25.00 | 20.00 |
| Rip-rap ..... | 4,000 cu. yds. | .90 | .30 | 1.00 | 1.00 | 1.00 | 1.50 |
| Iron and steel work ..... | 1,190,000 lbs..... | .02⅝ | .02⅝ | .0253 | .02½ | .02¾ | .0248 |
| Of draw span ..... | 470,000 " .... | .02⅝ | .0259 | .0259 | .02⅝ | .02¾ | .0248 |
| Turntable, etc. ..... | 220,000 " .... | .06 | .0353 | .0353 | .03½ | .03¾ | .0297 |
| Wrought iron or steel railing ..... | 2,500 lin. ft.. | 3.50 | 2.00 | 2.00 | 1.90 | 2.25 | 3.00 |
| Timber roadway, including spikes, etc..... | 120 M. ft... | 30.00 | 25.00 | 25.00 | 25.00 | 30.00 | 25.00 |
| Timber sidewalks, including spikes, etc... | 45 " " | 50.00 | 25.00 | 25.00 | 25.00 | 30.00 | 25.00 |
| Asphalt roadway (Trinidad) ..... | 2,210 sq. yds. | 2.50 | 2.30 | 2.25 | 2.30 | 2.50 | 2.50 |
| " (Rock) ..... | 2,210 " " | 1.50 | 2.30 | 3.00 | 2.30 | 2.50 | 2.50 |
| " sidewalk (Trinidad) ..... | 875 " " | 2.50 | 2.00 | 1.90 | 2.00 | 2.00 | 2.00 |
| " (Rock) ..... | 875 " " | 1.50 | 2.00 | 2.50 | 2.00 | 3.00 | 2.00 |
| Embankment filling ..... | 24,500 cu. yds. | .55 | .25 | .50 | .50 | .30 | .30 |
| Rip-rap pavement of slopes ..... | 2,760 sq. yds. | 3.00 | .30 | 1.00 | .50 | 1.50 | 1.50 |
| Granite posts ..... | 200 each... | 6.00 | 6.00 | 5.00 | 6.00 | 3.00 | 3.00 |
| Curb stone ..... | 1,400 lin. ft... | .90 | .60 | .75 | .80 | .55 | .55 |
| Gravel sidewalk, rubble stone foundation. | 10,000 sq. ft... | .11 | .10 | .12 | .08 | .10 | .10 |
| Gravel roadway, Telford foundation..... | 2,800 sq. yds. | 1.35 | 1.00 | 1.25 | .30 | 1.00 | 1.00 |
| Gas tank ..... | 1..... | 600.00 | 500.00 | 500.00 | 500.00 | 500.00 | 500.00 |
| Gas piping ..... | 1,800 lin. ft.. | .02½ | .25 | .25 | .25 | .10 | .10 |
| Gutter outlets ..... | 4 each... | 150.00 | 25.00 | 25.00 | 18.00 | 20.00 | 20.00 |
| Lampposts ..... | 26 " ... | 75.00 | 35.00 | 35.00 | 35.00 | 8.00 | 8.00 |
| Garden mold ..... | 280 cu. yds. | 2.00 | .50 | 1.00 | 1.00 | 2.00 | 2.00 |
| Sod ..... | 570 sq. yds. | .45 | .40 | .50 | .30 | .50 | .50 |

Total bid for each plan

| | Stephens —M. J. Dady.— | | —& O'Rourke.— | | —A. McMillen— | | T. H. Riddle —& Co.— | | O'Brien, Sheehan —& McHale.— | | —J.C. Rodgers— | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Plan A. | Plan B. | Plan A. | Plan B. | Plan A. | Plan B. | Plan A. | Plan B. | Plan A. | Plan B. | Plan A. | Plan B. |
| A.. | $192,897 | $176,642 | $150,323 | $147,648 | $170,656 | $163,136 | $171,761 | $159,746 | $193,126 | $184,331 | $171,578 | $163,578 |
| B.. | 195,659 | 179,404 | 153,031 | 150,356 | 173,166 | 165,646 | 174,469 | 162,454 | 195,013 | 186,218 | 177,748 | 166,728 |
| C.. | 192,574 | 176,319 | 153,031 | 150,356 | 175,348 | 167,828 | 174,469 | 162,454 | 195,013 | 186,218 | 177,748 | 166,728 |

A. With timber floor. B. With Trinidad asphalt. C. With Rock asphalt.

ASPHALT PAVING, ETC.—Rochester, N. Y.—The following bids were received by the executive board Dec. 30 for asphalt paving, etc., in Willard Park; contract was awarded the Rock Asphalt Pavement Co.:

| Quantities. | The Rock Asp. Pavement Co. | Rochester Vulcanite Pavement Co. | Utica Pavement Co. |
|---|---|---|---|
| New asphalt pavement 1,300 sq. yds. | $2.00 | $2.20 | $2.23 |
| New 6-in. curbstone .. 900 lin. ft.. | .70 | .90 | .90 |
| Lot laterals, 14-ft. long 14..... | 8.00 | 7.00 | 7.00 |
| 7½-in. water serv. pipe & fixt.: | | | |
| North side, 23 ft. long..... | 16.00 | 12.80 | 12.60 |
| South side, 5 ft. long..... | 11.00 | 6.75 | 7.50 |
| Total ..... | $3,531 | $3,635 | $3,678 |

SEWER.—Bay City, Mich.—The following bids were received by the council Dec. 30 for constructing a sewer in Jenney st.; E. L. Shaw, Cy. Engr.:

| Items. | Peterson & Burd. | Mapes, Reid & Meachn. | Ryan & Donohue. | Lampson & Crowley. | Henley & Osborne. |
|---|---|---|---|---|---|
| 24 × 36-in. brick sewer..... | $1.00 | $1.28 | $1.40 | $1.50 | $1.50 |
| 20 × 30-in. " " ..... | 1.20 | 1.30 | 1.15 | 1.19 | 1.50 |
| 18-in. socket tile sewer..... | 1.15 | 1.16 | 1.15 | 1.10 | 1.40 |
| Trestle substructure, lin. ft. | 1.60 | 1.70 | 1.75 | 1.70 | 1.60 |
| White pine timber* M. ft.. | 20.00 | 18.00 | 12 00 | 14.00 | 10 00 |
| Concrete, cu. yd. ..... | 5.00 | 5.70 | 6.00 | 6.00 | 3.50 |
| Excavation, cu. yd. ..... | 1.00 | .60 | .50 | .50 | .45 |
| Brk work for footgs, cu. ft.. | .30 | .35 | .30 | .20 | .28 |
| Manhole, compit., with cstgs. | 20.00 | 9.00 | 25.00 | 25.00 | 28.00 |
| Lmphle (6-in. tile) with covr | .15 | .70 | .10 | .20 | .25 |

*Other than trestle.

GRADING, ETC.—Bridgewater, Conn.—S. P. Treat, Selectman, writes us that the highway commissioners awarded the contract Dec. 29 to the town of Bridgewater for 600 sq. yds. of grading, etc., at 85 cts. a sq. yd.

**GRADING AND GRAVELING.—Riverside, Cal.—The** following bids were received by the city trustees Dec. 28 for grading and graveling in Orange St., from First to 8th Sts.; contract awarded J. H. Chambers:

| Items. | A. Fleck & Ormond. | J. H. Chambers. |
|---|---|---|
| Grading roadbed, sq. ft. | $0.0075 | $0.01 |
| Grading sidewalk, sq. ft. | .0075 | .005 |
| Graveling roadbed, sq. ft. | .015 | .0075 |
| Graveling sidewalk, sq. ft. | .0125 | .006 |

GRADING, PAVING, ETC.—Birmingham, Ala.—C. M. Burkhalter & Co. have been awarded the contract for 6-in. granite curbing at 38 cts. a ft., and 5-in. at 35 cts. Mehaffey & Co. have the contract for artificial stone sidewalks at $1.19¾ a sq. yd., and for brick paving at $1.45 a sq. yd. Alderman Graham, Chn. Com.

ELECTRIC LIGHTING.—Rockland, Me.—The Knox Gas & Electric Co. is reported to have been awarded the contract for furnishing this place with 65 1,200 c. p. arc lights at $100 a year, each, on moonlight schedule.

**STONE BLOCK PAVING.—Rochester, N. Y.—The** following bids were received by the executive board Dec. 30 for stone block paving in Exchange St.; Thos. J. Neville, Clk.; contract awarded Whitmore, Rauber & Vicinus:

PAVING, CEMENT, ETC.—Richmond, Va.—W. E. Cutshaw, Cy. Engr., informs us that the following bids were received Dec. 28 for various street work; all local bidders:

| Bidder. | Paving. Spall or rubble for alleys.[1] | Paving. Stone for 1898 repairs —a sq. yd.— New. | Old. |
|---|---|---|---|
| Chas. Gasser | $0.93½ / .95 / 1.04 | $0.90½ | $0.34 |
| Armbrecht & Middendorf | .99 / .99½ | .90 | .35 |
| James Netherwood | .74* | ..... | ..... |
| Peter Donald & Son | .87½ | .75* | .24* |
| J. C. Wimbrunn & Bro. | .94 / .96½ / 1.04 | .90 | .31½ |
| E. R. Goodwin | ... | .89 | .30 |

[1] A sq. yd. *Awarded contract.

Brick paving for repairs during 1898: The Davis Brick Co., 55 cts. a sq. yd. for new, and 13 cts. for old; M. E. Billings, 54 cts. and 13 cts. (awarded contract); John Maim, Jr., 60 cts. and 25 cts, respectively. Cement during the year: Carneal & Davis, 98¾ cts. a bbl.; S. H. Hawes & Co., 92 cts. (accepted); Warner, Moore & Co., 93¾ cts., and James River Cement Works, Locher, Rockbridge county, Va., 94 cts., and 82 cts. in cloth.

Bids Received at Rochester, N. Y., Dec. 30, for Stone Block Paving.

| Quantities. | | Chambers & Casey. | The Rock Asphalt Pavement Co. | Whitmore, Rauber & Vicinus. | William Fuller. | H. N. Cowles. | Lauer & Hagaman. | Gilbert Brady & Co. | William H. Jones & Sons. |
|---|---|---|---|---|---|---|---|---|---|
| New stone pavement, Medina block | 2,350 sq. yds. | $2.50 | $2.60 | $2.65 | $2.67 | $2.75 | $2.80 | $2.90 | $3.20 |
| Sidewalks dressed off to form curb. | 275 lin. ft.. | .15 | .35 | .10 | .45 | .40 | .28 | .20 | .25 |
| Flag sidewalk relaid | 4,000 sq. ft... | .05 | .08 | .05 | .07 | .04 | .10 | .08 | .05 |
| 7-in. crosswalk flagging, new | 900 " " .. | .40 | .56 | .45 | .45 | .60 | .35 | .50 | .45 |
| New 6-in. curbstone | 500 lin. ft.. | .68 | .75 | .45 | .70 | .60 | .79 | .80 | 1.00 |
| New surface sewers | 2 each... | 25.00 | 28.00 | 18.00 | 25.00 | 35.00 | 50.00 | 35.00 | 50.00 |
| Surface sewers in car tracks | 2 " ... | 20.00 | 12.00 | 9.00 | 20.00 | 15.00 | 35.00 | 25.00 | 20.00 |
| New laterals, 30 ft. long | 10 " ... | 60.00 | 70.00 | 20.00 | 55.00 | 60.00 | 60.00 | 110.00 | 60.00 |
| ¾-in. water service pipe fixtures | 18 sets.... | 6.00 | 7.50 | 6.00 | 7.50 | 6.00 | 7.00 | 7.00 | 7.50 |
| ¾-in. water service pipe, laid... | 200 lin. ft.. | .45 | .65 | .43 | .50 | .40 | .60 | .50 | .47 |
| Portland cement concrete | 100 cu. yds. | 5.00 | 4.45 | 5.00 | 5.00 | 2.40 | 6.00 | 5.00 | 4.50 |
| Brick masonry | 5 " " | 10.00 | 10.50 | 8.50 | 12.00 | 7.00 | 16.00 | 12.00 | 12.00 |
| Total | | $8,301 | $8,948 | $8,076 | $8,868 | $8,736 | $9,463 | $10,046 | $10,173 |

BRIDGE.—New York, N. Y.—The following bids were received Dec. 28, by the commissioner of street improvements of the 23d and 24th Wards, for constructing a bridge over the New York & Harlem R. R. at 153d St.:

| Quantities. | | O'Brien, Sheehan & McEwan, 258 Broadway, $107,643. | A. C. Gildersleeve, 39 Grand St., $106,314. | Stephens & O'Rourke, 44 Broadway, $112,768. | King Bridge Co., 301 Fifth Ave., $122,247. |
|---|---|---|---|---|---|
| Earth excavation | 1,800 cu. yds. | $0.50 | $0.50 | $1.00 | $1.00 |
| Rock excavation | 5 " " | 1.50 | 3.00 | 2.00 | 5.00 |
| Filling | 8,800 " " | .30 | .50 | .75 | .20 |
| Curb | 475 lin. ft.. | .60 | .10 | .50 | .60 |
| Flagging | 1,870 " " | .20 | .10 | .25 | .20 |
| Bridge stone | 270 " " | .50 | .10 | .60 | .50 |
| Piles | 5,500 " " | .28 | .25 | .22 | .25 |
| Concrete | 350 cu. yds. | 6.60 | 6.00 | 6.00 | 6.50 |
| Masonry: | | | | | |
| Rubble, fndations | 650 " " | 5.00 | 5.00 | 6.00 | 5.00 |
| Retaining wall | 2,200 " " | 5.00 | 4.20 | 5.00 | 5.00 |
| Dry rubble (lump sum) | | 800 | 100 | 800 | 1,500 |
| Masonry | 1,375 cu. yds. | 10.50 | 14.00 | 15.00 | 18.00 |
| Cap stones | 1,850 lin. ft.. | 2.00 | 1.00 | 1.50 | 1.25 |
| Four-axed work | 900 " " | .40 | .60 | .40 | .50 |
| Six-axed work | 900 " " | .50 | .80 | .50 | .60 |
| Eight-axed work | 660 " " | .60 | 1.00 | .60 | .75 |
| Coping | 535 " " | 2.00 | 1.30 | 2.50 | 1.00 |
| Fence | 535 " " | .20 | .50 | 1.00 | .50 |
| Iron and steel | 1,900,000 lbs..... | .02½ | .02½ | .02½ | .03 |
| Railing | 1,010 ft..... | 4.50 | 4.50 | 4.00 | 4.50 |
| Lamps and posts | 26 each... | 70.00 | 70.00 | 35.00 | 43.00 |
| Asphalt | 2,410 sq. yds. | 2.00 | 2.20 | 2.20 | 2.40 |
| Macadam | 925 " " | 1.25 | .50 | 1.20 | 2.25 |
| Lumber (lump sum) | | 200 | 200 | 1,000 | 600 |
| 12 to 18-in. pipe | 40 ft..... | 1.00 | 1.50 | 1.00 | 2.00 |

**LEVEE WORK.—New Orleans, La.—The following** contracts have been awarded for certain levee work; Capt. Geo. McC. Derby, U. S. Engr., 3232 Prytania St., New Orleans:

Bids Received at New Orleans, La., for Levee Work.

| Bidder. | Embankment, cu. yds. | Lowest bid, cts. | Total. | Date of award. |
|---|---|---|---|---|
| F. M. McLaughlin, Waterproof, La. | 177,200 | 16.25 | $28,795 | Dec. 28, 1897. |
| M. Hanick, Manchac, La. | 55,200 | 18.00 | 9,936 | " " |
| | 115,600 | 14.49 | 16,750 | " " |
| I. R. Bobbitt, Baton Rouge, La. | 136,500 | 12.90 | 17,609 | " " |
| Victor Adema, Home Place, La. | 106,800 | 12.50 | 13,350 | " " |
| | 32,000 | 14.75 | 4,720 | Dec. 21, " |
| Joseph Hingle, Jr., Home Place, La. | 30,000 | 12.25 | 3,675 | " " |
| | 31,500 | 12.20 | 3,843 | " " |

SEWERS.—Erie, Pa.—B. E. Briggs, Cy. Engr., informs us that the following bids were received Jan. 6 for constructing pipe sewers; all local bidders; Ash St., from 4th St., north for 330 ft., average cut, 12½ ft.; relief sewer in north lawn of 10th St., from center of French St. to Mill Creek, 500 ft., average cut, 7½ ft.; contract awarded—Ash St., David Jones at total of $446; 10th St., John Thornton at total of $295:

12-in. Sewer in Ash St.

| Quantities. | | David Jones. | John Thornton. | Edw'd Driscoll. | Dennis O'Brien. | B. J. Murphy. | D. McCormick & Son. |
|---|---|---|---|---|---|---|---|
| 12-in. pipe: | | | | | | | |
| Straight | 300 ft. | $0.75 | $0.99 | $2.00 | $1.12 | ..... | $0.99 |
| Curved | 10 " | .75 | .99 | 1.00 | 1.12 | ..... | 1.10 |
| Branch pipe | 20 " | .85 | .99 | 1.50 | 1.12 | ..... | 1.10 |
| 9-in. for spills,&c | 30 " | .45 | .25 | .35 | .30 | ..... | .30 |
| 6-in. for h. cons. | 250 " | .25 | .24 | .40 | .25 | ..... | .25 |
| Manhole | 1... | 40.00 | 32.50 | 35.00 | 27.00 | ..... | 35.00 |
| Catchbasins | 2... | 40.00 | 24.50 | 32.00 | 27.00 | ..... | 30.00 |

15-in. Relief Sewer in 10th St.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15-in. pipe: | | | | | | | |
| Straight | 470 ft. | $0.55 | $0.55 | $0.75 | $0.55 | $1.00 | $0.82 |
| Curved | 10 " | .55 | .55 | 1.00 | .55 | .75 | .97 |
| Branch pipe | 10 " | .55 | .55 | 1.00 | .55 | 1.00 | .97 |
| 9-in. for spills,&c | 10 " | .40 | .25 | .30 | .20 | .40 | .25 |
| 6-in. for h. cons. | 30 " | .15 | .20 | .30 | .18 | .20 | .20 |
| Manhole | 1... | 35.00 | 17.00 | 28.00 | 30.00 | 35.00 | 25.00 |

IMPROVING BOULEVARD.—Stapleton (S. I.), N. Y.—The following bids were received Jan. 5 by the Southfield Highway Commission for improving the Southfield Boulevard:

| Bidder. | Contracts, A. 70 ft. wide, 17,900 lin. ft., a lin. ft. | A. 100 ft. wide. | B. 70 ft. wide, 16,423 lin. ft., a lin. ft. | B. 100 ft. wide. |
|---|---|---|---|---|
| Brown & Quien | $4.00 | $5.25 | $3.95 | $4.95 |
| Jos. Johnson (accepted). | ..... | 4.50 | ..... | 4.30 |
| Donovan Bros. | 4.05 | 5.18 | 3.80 | 5.70 |

## INDUSTRIAL NOTES.

THE GUTTA PERCHA & RUBBER MFG. CO., New York, has increased its capital stock from $800,000 to $1,000,000.

QUEEN & CO., INC., Philadelphia and New York, announces that Mr. G. S. Woolman has ceased to be the manager of its office in the latter city.

MR. L. E. MILLER, Cape May, N. J., is reported to have secured a contract from the Mexican government for the drainage system of the city of Mexico.

THE EYELESS TOOL CO., New York, has just closed a contract with the Atchison, Topeka & Santa Fe Ry. system for its entire tool supply for the ensuing year.

JOHN SOUTHER & CO., Boston, Mass., have adopted the standard railway gage and longer frame for their excavators. The change of frame and trucks has been made in such a manner that the railways now using the machines of this company can transform them into the railway gage at an expense of not much over the cost of the new frames and trucks.

THE AMERICAN PEGAMOID CO., New York, has elected the following officers: Pres., Jos. J. Byers; Vice-Pres., Arthur W. Pope; Treas., G. L. Herbert; Secy., W. C. Van Antwerp; Asst. Secy., Jas. W. Murphy.

THE AMERICAN WINDOW GLASS CO., Baltimore, Md., is reported to have put all its window glass factories in the country in operation. This is said to give employment to 10,000 men, of whom 6,500 are skilled workmen.

MR. D. F. HOLMAN, 140 Dearborn St., Chicago, Ill., manufacturer of tracklaying machinery, reports business in his line to be improving, and he thinks that the present year will be a good one in railway construction. He will leave for Mexico shortly.

THE TROY STEEL CO., Troy, N. Y., has shut down its large plant on Breaker Island, and it is said that it is very doubtful if the same is ever put in blast again, owing to the inability of the works to compete with the Pennsylvania firms at the present prices.

BLOHM & VOSS, Hamburg, Germany, have the contract for a sister ship to the "Pennsylvania" and the "Pretoria," of the Hamburg-American Line. They have also the contract for two other steamers of 10,000 gross register tons each from the same company.

THE ROGERS LOCOMOTIVE WORKS, Paterson, N. J., are building 15 engines for Japan, 10 for the Mobile & Ohio R. R. and three for the St. Joseph & Grand Island R. R., according to report. About 500 men are employed at present, and the number will be increased this week.

NEELD & FOLEY, Pittsburg, Pa., contractors for the construction of the stone arch bridge at Shelley Park, in that city, have made an assignment to [illegible] Harrison, of Garrison, Williams & Co., to [illegible] their machinery and the interests of friends. [illegible] said to be a business arrangement and [illegible] the assets fully cover the liabilities.

THE WINCHESTER REPEATING [illegible] CO., New Haven, Conn., is said to have received an [illegible] for 10,000 military rifles of the 1897 model, with 5,000 [illegible] cartridges, for the Russian government. The works [illegible] running 12 to 15 hours a day to fill the order.— The company has also received the contract for 5,000 small [illegible] for the U. S. Navy and Marine Corps, according [illegible] report.

THE POST & JACOBI CO., Chicago, Ill., manufacturers of drawing materials, etc., which was [illegible] in our issue of Dec. 9, to have made an assignment [illegible] Frederick Bondy, has adjusted all its difficulties [illegible] again assume control of its business. The company has purchased the plant of the X-Rays Print Co., which will hereafter be conducted in the former's establishment.

THE GROTON BRIDGE & MFG. CO., [illegible], N. Y., reports large contracts at Monroe, La., Greenville, Miss., Port Gibson, Miss., Fallsburgh, N. Y., and several orders for steel buildings for New York city and vicinity. On account of the amount of work on hand the company has let contracts for a new machine shop 60 by 120 ft., of modern design and construction, which will be in operation in 30 days.

THE CHESTER B. ALBREE IRON WORKS, Allegheny, Pa., is reported to have just received a contract for 17,000 ft. of iron railing, weighing 60 lbs. per foot, for the Harlem River Speedway, New York. A contract for 1,500,000 lbs. of steel forgings is also said to have been received from a Pittsburg firm. An agency has been established in New York, with Chas. G. Eckstein & Co., 45 Vesey St., who also have branch houses in Vienna, Brussels and Berlin.

THE F. C. AUSTIN MFG. CO., of Chicago, whose works were destroyed by fire on Dec. 29, writes [illegible] that it is its intention to make arrangements whereby it can shortly fill most of its orders. One of the warehouses was saved, which contained a large amount of stock that will be immediately available, and some of the neighboring works have offered the use of a share of their plant until such time as the company can rebuild. The insurance was $90,000, and the loss will be below that figure.

NEW COMPANIES.—Dunn Mfg. Co., Pittsburg, Pa.; $5,000, commencing with $500; to manufacture iron and steel; Treas., Wm. T. Dunn, Pittsburg.

Economy Mfg. Co., New York, N. Y.; $50,000, commencing with $1,500; to use machinery in connection with the generation of steam, etc.; Horace Craighead, Auguste J. Paris, Jr., J. V. A. Craighead, J. P. Craighead, and J. K. Green, New York.

Southern Steel Co., Youngstown, O.; $2,000,000, commencing with $11,500; to manufacture iron and steel; Thos. B. Blyholder, W. M. Noble, T. M. Body, Jr., H. G. Tinker, and R. T. McElroy, all of Pittsburg.

Dynamite Ordnance & Armament Co., Elizabeth, N. J.; $100,000, commencing with $2,500; to conduct an agricultural, manufacturing and chemical business; Geo. B. Martin, Elizabeth; Francis B. Riggs, Geo. P. Toby and Edward Canfield, New York.

Canyon Construction Co., Charleston, W. Va.; $10,000, commencing with $500; to build and construct railways, bridges, etc.; L. W. Goode, T. R. Lombard and F. B. Wilson, Brooklyn, N. Y.; R. L. Thomas, Fanwood, N. J.; E. N. Emerson, New York.

Alabama Construction Co., Jersey City, N. J.; $50,000, commencing with $1,000; to construct railways, bridges, etc.; Samuel Bruckheimer, Wm. A. Bradley and Wm. N. Tate, New York.

Van Port Brick Co., Vanport, Va.; $5,000; to manufacture all kinds of brick; Treas., Edward P. Botsford, Frank Moore, Wm. T. Dunn and George Rollins, all of Pittsburg.

New Jersey Portland Cement Co., Perth Amboy, N. J.; $60,000, commencing with $20,000; to manufacture and sell cements; Henry B. Nedham, New York; William Kolbe, New Rochelle, N. Y.; Philip Lindsley, Raritan, N. J.; Harry Robinson, Fanwood, N. J.; Chas. C. Kelley, Jersey City.

Trinidad Asphalt Co., Jersey City, N. J.; $2,000,000, commencing with $1,000; to mine and manufacture asphalt, etc.; Newton C. Lyon, Jefferson Place, Montclair, N. J.; Array E. Thurber, 121 3d Ave., Newark, N. J.; Ira Atkinson, Passaic, N. J.

Hadley Marble & Slate Co., Jersey City, N. J.; $50,000, commencing with $1,000; to manufacture marble, etc.; Chas. P. Hadley and J. Frank Hadley, Boston, Mass.; Elbridge G. Kelley, Peabody, Mass.; Orrin H. Carpenter, Malden, Mass.; Elgin L. McBurney, Jersey City.

Columbian Burner & Blower Co., Bayonne, N. J.; $5,000, commencing with $1,000; to manufacture hydrocarbon burners, steam blowers, etc.; Edwin Cadmus, 53d Ave. D; John Hoerst, 80 West 82d St., and James R. Gatchel, 40 East 25th St., Bayonne.

United Railway Supply Co., Camden, N. J.; $50,000, with all paid in; Walter N. Boyer, John Berry, Z. P. Boyer, Jr., and D. C. McKee, Philadelphia, Pa.; James Rickenbach, Camden.

Walter Automatic Air Coupler Co., Charleston, W. Va.; $750,000, commencing with $25; to manufacture air coupler devices of all kinds; E. L. Squire, S. W. Nichols, S. J. Procter, R. M. Oliver, and L. G. Dimming, all of Charleston.

Manhattan Automatic Temperature Control Co., New York, N. Y.; $10,000, commencing with $500; to deal in appliances acquired by the Compton International Automatic Control Co.; W. A. Castle, Springfield, Mass.; Leon Gotthell, and Victor Friedlander, New York; Geo. B. Gall, Rutherford, N. J.; F. C. Overton, Arlington, N. J.

American Telephone Co., Allegheny, Pa.; $1,000; to construct and maintain telephone lines; Treas., D. C. Cawley, Allegheny.

American Faucet Co., New York, N. Y.; $50,000, commencing with $50; Wm. H. White, J. Carson and H. P. Douglas, New York; A. L. Livermore, Yonkers, N. Y.; H. W. Barkley, Montclair, N. J.

Beaver Dam Marble Quarries Co., Baltimore, Md.; $100,000, commencing with $50; J. Crowther, Jr., and Wm. H. Bosley, Cockeysville, Md.; J. C. Bosley, Annapolis, Md.; Wm. B. Crowther, Lutherville, Md.; C. A. Hiss, Baltimore, Md.

Real Estate & Investment Co. of Atlantic City, Atlantic City, N. J.; $200,000, commencing with $17,000; to build streets, etc.; Carlton Godfrey, Wm. A. Faunce, Wm. A. Bell, Louis Kuehnle and J. Byron Rogers and Rodman Corson, all of Atlantic City.

American Mining & Improvement Co., Charleston, W. Va.; $1,000,000, commencing with $10,000; to bore for oil and gas, etc.; Chas. A. Boone, W. B. Foust, J. B. Good and W. A. Briggs, Shickshinney, Pa.; Chas. S. Nesbitt, Plymouth, Pa.

The Larose, Toluca & Eastern Telephone Co., Toluca, Ill.; $2,000; Jonas T. Ball, Lincoln H. Hester and Thomas C. Colehower.

Altheimer Long Distance Telephone Co., Altheimer, Ark.; $25,000; J. H. Moon, W. H. Bellamy, N. T. White and Dr. W. C. Walt.